Chapter 4

A Plan for the Rockville Pike Neighborhood

OVERVIEW

THIS CHAPTER IS THE CORE OF THE Rockville's Pike Neighborhood Plan. It describes the policies for transforming the Rockville Pike corridor into an attractive, walkable area, enhancing its prosperity, and improving mobility, while acknowledging the distinct characteristics of different sectors of the Plan Area.

The vision for the Rockville Pike corridor emerged from the extensive public involvement process that began in 2007, and is described in Appendix A, integrated with the findings of the transportation, land use, and economic analysis that are summarized in Chapter 2. The Planning Commission held public hearings in March 2011 on a consultant-driven draft and revised that draft following numerous work sessions. Additional public hearings were held on a revised draft plan and on suggested zoning revisions in spring 2013. Those hearings were followed by more work sessions and an extended public review and comment period held by the Mayor and Council.

The plan vision is to transform much of the Rockville Pike corridor from a utilitarian, aesthetically conventional retail strip into a special place featuring improved overall mobility, economic vibrancy, and a pleasant and greener environment. These themes were articulated as the Corridor Planning Principles, outlined in Chapter 3.

Chapter 4 is organized into the following sections:

- Overview
- Principal Transportation Policies
- Principal Land Use Policies

Even though one of the main purposes of the plan is to integrate transportation and land use policies, they have been separated in this chapter for the sake of clarity.

PRINCIPAL TRANSPORTATION POLICIES

This section describes the transportation policies for the Rockville Pike Plan Area, which are designed to improve mobility, safety, and connectivity for automobile drivers, pedestrians, bicyclists and transit riders. Enhancements to the infrastructure will improve functioning for every travel mode, while reducing conflicts. These improvements also serve the land use policies that are described later in this chapter by helping to create a vibrant, attractive, and pedestrian-friendly place. Strategies for implementing infrastructure improvements and transportation policies are discussed in Chapter 5, Implementation.

The principal transportation policies are as follows:

1. Re-design and reconstruct Rockville Pike as a multi-way boulevard
2. Expand the street network
3. Adhere to the City's Complete Streets Policy
4. Optimize access to and use of public transit

A multi-way boulevard attempts to balance numerous roadway functions.

1. RE-DESIGN AND RECONSTRUCT ROCKVILLE PIKE AS A MULTI-WAY BOULEVARD.

Rockville Pike serves a dual transportation role in terms of mobility and access. It is part of a regional corridor through Montgomery County, as well as a local road for drivers trying to reach local land uses. A "multi-way" boulevard design will allow the Pike to serve both functions better.

What is a multi-way boulevard?

A multi-way boulevard is analogous to mixed-use development in that it is a "mixed-use" public way that attempts to better serve the sometimes competing needs of roadway capacity, local access, transit, street parking, bicycle accommodation, and pedestrian comfort.

A multi-way boulevard can handle a large volume of relatively fast-moving through-traffic on central travel lanes as well as slower local traffic within the same corridor, but on separate yet adjacent and parallel roadways. Through traffic and local traffic are separated by attractively landscaped medians. The combination of medians, local access lanes flanked by on-street parking, bicycle paths, and wide sidewalks together create extended, comfortable pedestrian areas where movement is at a slow pace. Pedestrians are visually and physically removed from faster-moving through traffic and sidewalks become pleasant places to walk and socialize.

Multi-way boulevards have been a design choice for significant streets throughout the world, including the United States. The iconic boulevards of Paris and Barcelona; the Esplanada in Chico, California; and Ocean and Eastern Parkways in Brooklyn, New York are all examples that demonstrate their success.

Rockville Pike as a Multi-Way Boulevard

The central main lanes of Rockville Pike and parallel side access roads together form the envisioned multi-way boulevard with a distance between building faces of approximately 252 feet (the boulevard cross-section is described in detail later in this chapter). This cross-section is possible because there are currently very few buildings on the land where the boulevard would be built. Building setbacks created in the 1970s, and refined by the 1989 plan, have been establishing the build-to-line at 135 feet from the centerline of the Pike, for a total distance of 270 feet from building face to building face.[1] Since that time, at least 50% of any new building's façade on the Pike has been required to be located 135 feet from the road's centerline, with no portions of the buildings being closer to the center.

Figure 4.1: *Long recognized as the major high-end shopping street in Barcelona, the elegant Paseo de Gracia in Barcelona is a classic multi-way boulevard. Source: ACP Visioning + Planning*

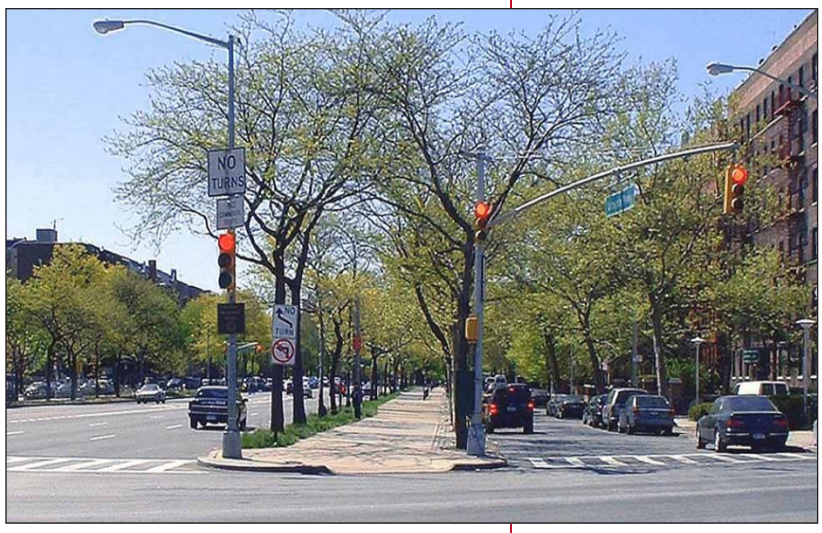

Figure 4.2: *Ocean Parkway, Brooklyn, New York was designed by Frederic Law Olmsted and Calvert Vaux in the late 19th Century. Source: City of Springfield, OR, Public Works Department*

Montgomery County is considering developing a countywide Bus Rapid Transit (BRT) network that would include a route along Rockville Pike. The boulevard cross-section, shown in Figure 4.3, incorporates the proposed two-way BRT line in the center median of the main travel lanes. The inclusion of the BRT infrastructure, which includes bus guideways and stations, increases the curb-to-curb distance of the Pike's main lanes from 84 feet to 120 feet, a net increase of about 36 feet. It also provides for a wider and safer respite area for pedestrians crossing the road in two phases.

The setback area along the Pike (between the build-to line and the property line) is used today for parking and/or as a rudimentary access lane that functions much like a parking lot drive aisle. The 1989 Rockville Pike Plan called for the creation of access roads to separate through traffic from local traffic along Rockville Pike and, as the name implies, to provide access to private property. Informal access roads have been built sporadically in conjunction with redevelopment projects since that plan was adopted, but do not provide complete connections. The right

[1] *A build-to-line is a setback line that sets the location of building construction on the lot and is established to create a uniform building façade along the street.*

(outer) lane of Rockville Pike continues to be punctuated by individual driveways for almost every parcel and a significant portion of local traffic is forced onto Rockville Pike even for short trips between nearby properties.

The multi-way boulevard recommended by the *Rockville's Pike Plan* transforms this undefined swath of land from a confusing and relatively uncontrolled auto circulation arrangement into a much greater asset for all of the Pike's users, including pedestrians, bicyclists, bus riders, and motorists. It sets the build-to line closer to the Pike than did the 1989 plan, while ensuring a strong buffer between fast-moving traffic and pedestrians. It provides the framework for the vibrant place envisioned by the Rockville community during public meetings and through public testimony.

Figure 4.3 provides the boulevard vision, although modifications are described for the east side of the Middle and North Pike sections.

Primary Roadway

The key purpose of the main lanes of the proposed multi-way boulevard is to carry faster-moving and non-local auto traffic, as well as local buses. Features of the primary roadway are listed below:

- Approximately 52 feet of right-of-way width for a two–directional Bus Rapid Transit (BRT)[2] line in the center of the Pike with medians on either side for BRT stations and automobile left turn lanes, which widens the overall curb-to-curb crossing distance of the primary roadway by about 36 feet. Medians provide refuge for pedestrians crossing the Pike. The 52 feet could be used as a wide median or for additional automobile lanes if the BRT line is not built, or until it is built.
- Three automobile travel lanes in each direction.
- The outer curb lane is wider (12 feet) than the other two (11-foot) lanes to accommodate local buses.
- Local buses travel in the central roadway (per Montgomery County's Department of Transportation preference, but consideration may be given to providing the local service in the access roads).
- This infrastructure can all be built within the existing 120-foot State right-of-way.

Ultimately, the State and the County will strongly influence decisions about the main lanes and BRT. The full boulevard design is included in this plan, however, for three reasons:

1. It is important for Rockville to articulate its desires because both the State and the County have indicated that Rockville's input will be considered;
2. Rockville must establish the overall framework and location for the access roads because they are likely to be a City-led project and could be built before the main lanes or the BRT line is built;
3. Rockville controls land use and, therefore, has the authority to set a defined

[2] *See page 4-19 of this chapter for a discussion of BRT.*

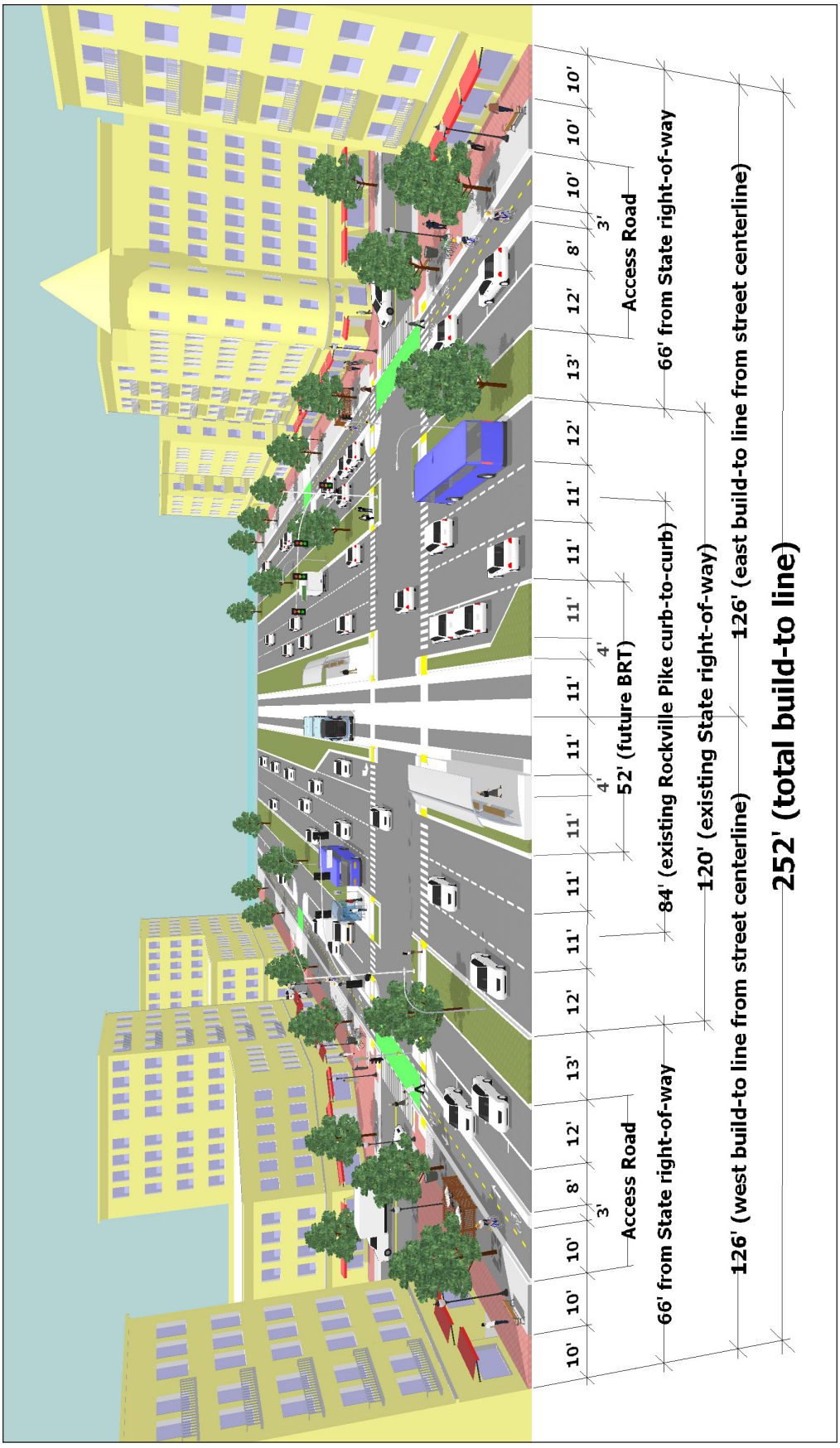

Figure 4.3: Typical Multi-Way Boulevard Street Section

build-to line for new development. The width of the boulevard is a key factor in determining the build-to line.

Access Roads

The access roads recommended by this plan provide access to property that is not right-of-way. They are also intended to substantially reduce the number of curb cuts and driveways along the portion of the Pike designed for through traffic, thereby improving flow in those main lanes. Access roads can link multiple adjoining properties to enable a "park once and walk" environment. Their design is for slower speeds, reducing the vehicle conflicts among faster-moving vehicles, slower-moving vehicles, bicyclists and pedestrians that currently occur on the Pike.

Access roads also help break down the scale of the formidable width of the boulevard by allowing pedestrians to cross in more than one stage, if necessary. Medians serve as buffers from moving traffic and provide a safe waiting area for pedestrians who are crossing the Pike. Pedestrians may not have to wait for a traffic signal change to safely cross the access roads, due to their slow speeds, though they will have to wait for a signal to cross the main roadway. Trees between the primary and the access roadways help with the demarcation, provide an overhead canopy, and make the boulevard attractive. In addition to trees, Environmental Site Design (ESD) storm water management, such as micro bioretention or bio swales, can be installed in the green medians.[3]

A reduced number of curb cuts can improve traffic flow.

The complexity of the activity that the access roads must accommodate can actually contribute to their safety.[4] In addition to low speed limits, drivers are forced to use greater caution and move slowly due to the volume and proximity of pedestrians and bicyclists. Pedestrians dominate and feel safe on the sidewalks, in the medians, and in the access road. Cars should be in the access roads only for a block or two; they are likely to have sufficient incentive to move back to the faster-moving mains lanes if traveling further.

Figures 4.3 and 4.4 include street parking on the access roads. Advantages of street parking are that it provides short-term parking for those accessing businesses whose storefronts will be adjacent to the public sidewalk (as is described in section 2 of the Land Use portion of this chapter) and an incentive to patronize those businesses. On-street parking also slows traffic, encourages street-oriented development, and may increase the number of pedestrians. Sections of the parking lane on the access road may be striped and signed to allow for intermittent pull-off areas within the parking lane for delivery trucks and other temporarily stopped vehicles in order to discourage double parking and frequent disruptions to the flow of the local traffic.

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[3] *Other ESD techniques should also be considered, such as permeable pavement for sidewalks and inside BRT wheel tracks, and proprietary devices such as tree box fillers. Like all of the boulevard design considerations, the management of storm water will need to be coordinated with the State Highway Administration; with storm water approval by the Maryland Department of the Environment.*

[4] *The Boulevard Book, Allan B. Jacobs, Elizabeth MacDonald, Yodan Rofe, 2002, MIT, Part 3, "Safety, Professional Standards, and the Importance of the Pedestrian Realm."*

South Pike and west side of Middle/North Pike

The full design of the boulevard access roads envisioned for Rockville Pike (see Figure 4.3) can best be achieved on both sides of the South Pike and along the west side of the Pike through the Middle and North sections of the Plan Area. Here, the access roads (see Figure 4.4) will provide:

- wide sidewalks that contain a clear walking area and an amenity zone;
- a two-way dedicated bike path with a buffer zone between it and parking;
- one lane of parallel on-street parking;
- one lane of slow-moving local traffic, with the direction of travel corresponding to the adjacent travel lanes of the Rockville Pike mainline;
- landscaped dividers between the main lanes and the access roads that also accommodate bus stops for local bus traffic in the main boulevard lanes.

Middle/North Pike – east side

The constrained configuration of parcels on the east side of the Pike in the North and Middle Pike sections is a significant and unique issue compared to other sections of the Plan Area. The net addition of approximately 36 feet (18 feet on each side) for the future BRT in the primary roadway would result in a significant loss of developable land area and parking for many of the properties. Surface parking is critical to these sites and structured parking may not be feasible for many, given their narrow site dimensions.

Implementation of the boulevard vision for properties in these locations may include modifications to support the auto-reliant nature of this portion of the corridor and preserve viability of businesses, as long as inter-site vehicular and bicycle movement, a continuous public sidewalk, and pedestrian, bicycle and vehicular safety are assured. Two-way vehicular inter-site movement may be allowed since there is no opportunity to provide street network east of the Pike in this portion of the corridor.

It is important to retain existing easements and to continue to obtain easements along the Pike to allow inter-site vehicular movement, and to require that all sites in this area provide for inter-site movement when they redevelop. A continuous ADA-compliant sidewalk must be provided, with a preferred location adjacent to buildings. However, a sidewalk adjacent to the main lanes of the Pike may be acceptable, given site constraints in this area, as long as there is a buffer. Similarly, a bike path may work better on the interior of some of these sites, rather than adjacent to the Pike. Other modifications may also be appropriate. A build-to line should be established in this area at 116 feet from the Pike centerline, which will bring buildings 10 feet closer to the centerline than the rest of the Pike, and provide more developable area for individual sites.

Reducing the number of curb cuts from the main travel lanes should be a priority in this area, as it is in the entire corridor, to improve traffic flow in the main lanes while maintaining access to all properties.

Benefits of the multi-way boulevard approach

Besides increasing transportation efficiency and safety, one of the best reasons for converting the existing Pike arterial to a multi-way boulevard is to enrich the pedestrian experience. The access road is really where place-making begins because walking alongside the access roads, buffered from the central roadway, is more like walking beside an urban neighborhood street than walking alongside a busy, high volume thoroughfare. Using this design, pedestrians will be at least 56 feet from the edge of the main thoroughfare in the South and West Pike sections where the formal access roads will be built. Today, sidewalks are immediately adjacent to the Pike, or separated only by a narrow strip of grass. Although this condition may need to continue, with some improvements, on the east side of the North and Middle Pike, the design for the access road shown in Figure 4.4 can greatly improve walking conditions elsewhere on the Pike.

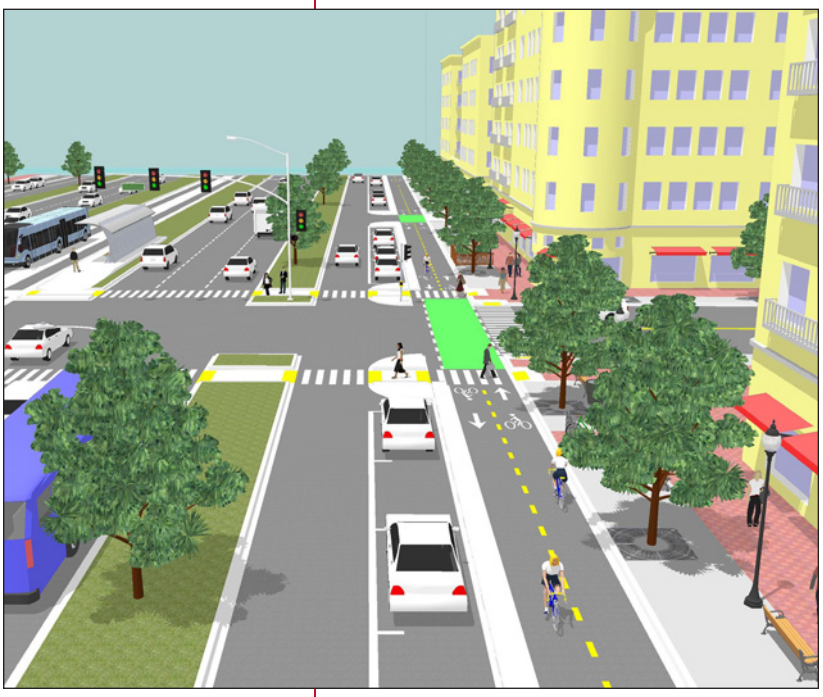

Figure 4.4: *Typical Access Road Section Detail.*

The multi-way boulevard approach will:

- *Allow for the separation of local and regional trips.* The separation improves the flow in the outer lane of the Rockville Pike mainline as vehicles no longer need to slow down to make right turns into individual driveways. The boulevard design offers a more controlled situation with limited ingress to and egress from the access roads and fewer curb cuts. The outer right lane, in particular, is safer and is kept flowing by reducing the number of driveway conflicts and turning movements.
- *Create the conditions for a shift in the transportation modal split along the Pike,* from heavy reliance on the private automobile to a range of transportation choices.
- *Make the Pike safer* by separating pedestrians and cyclists from faster-moving vehicles. The large number of curb cuts, long blocks, limited pedestrian connections, and lack of protected bike facilities, make today's Pike challenging for motorists, bicyclists, and pedestrians alike.
- *Provide a variety of tools to ensure that pedestrians may cross the Pike safely,* including refuge areas and adequately-timed pedestrian walk signals.
- *Integrate the Twinbrook Metro Station into the corridor and make transit a more attractive option* by increasing convenience for Metrorail and bus riders through improved sidewalks, protected crossings at intersections, an expanded street network, and the creation and improvement of pedestrian-friendly streets linking the station to the Pike. This is an important benefit because the Twinbrook station is one of the City's two major transit locations (the other being

the Rockville Station, located just north of the study area) and provides direct access from the regional rail transit network to the South Pike area that has the greatest potential for redevelopment.

- *Anticipate and plan for additional high capacity transit* to operate along the boulevard, if the County implements its Bus Rapid Transit initiative.
- *Bring pedestrians and bicycle users closer to the land uses of the Pike,* improve the experience of the road for non-motorized users, and expand bicycle access and safety through the multi-way boulevard's protected bicycle lanes.
- *Reinforce the role of the corridor as a significant commercial attraction in the region, while planning for increased numbers of residents.* Paralleling national trends, Washington D.C. consumers have shown increasing acceptance of and participation in pedestrian-oriented shopping/mixed-use environments in which significant numbers of residents and local workers walk or bike to retail clusters.
- *Facilitate the transformation of the corridor into an attractive place.* This is accomplished by the replacement of today's undistinguished appearance with tree-lined streets and sidewalks and the relocation of above-ground utility lines to below ground. It is also accomplished through development regulations that, over time, will shape redeveloped properties in ways that are consistent with the vision of the community as expressed in this plan.
- *Create a healthier community* in terms of a reduced carbon footprint, better air quality, and the promotion of more active lifestyles.

Access points, median breaks, and intersection movements

Access points between the main roadway and the access roads are limited with the recommended boulevard design, resulting in a significant reduction in curb cuts along the thoroughfare's right lanes (see Table 4.1). Eliminating individual driveways for every property adds capacity and improves safety in the thoroughfare's right lanes, by reducing the "stop and start" experience that is common at present, and reducing encounters between through traffic and pedestrians. As shown in Figure 4.5, traffic from the main lanes would generally enter the access roads beyond a signalized intersection and merge back into the main lanes prior to the next signalized intersection.

Table 4.1
Comparison of Existing & Recommended Intersections & Access Points

	Existing	Recommended
Signalized Intersections	8	10
Unsignalized Median Breaks	11	0
Pike Access Points/Curb Cuts	85	38

Unsignalized median breaks would be eliminated at the time that the BRT infrastructure is built, but traffic signals are added to two intersections (one in the Middle Pike and one in the North Pike, with definitive locations to be determined

based on new street alignments and coordinated with Maryland State Highway Administration). The new signals will further improve intersection operations, allow for more vehicular movement choices, and provide additional locations for pedestrians to safely cross the Pike. They would be coordinated with existing signals to maintain traffic flow along the Pike.

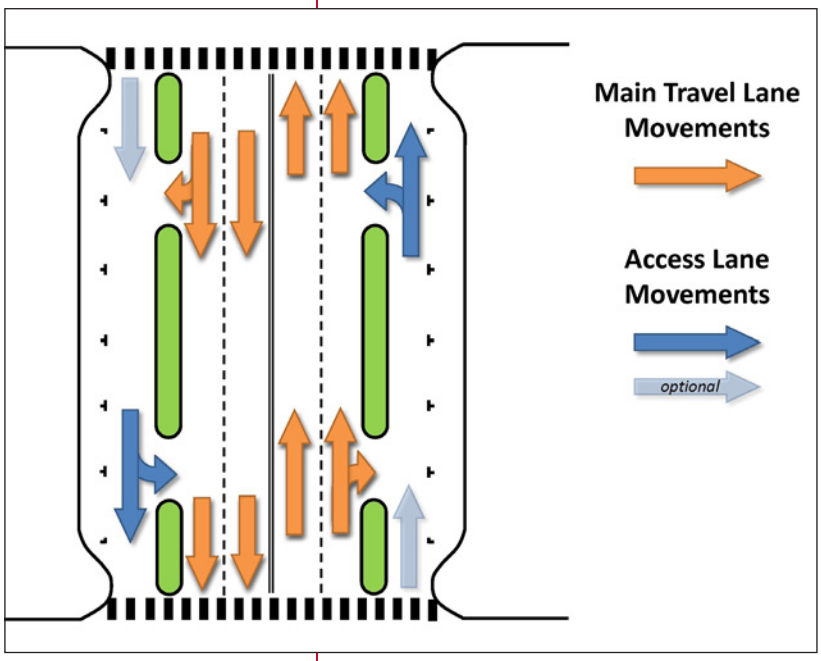

Figure 4.5: Typical Access Lane Operation Concept[5]

There are two recommended intersection traffic patterns that may be applied along the "typical" sections of the boulevard, identified below as Options 1 and 2. Each option has its own advantages for different circumstances. The choice for each intersection will be made at the engineering phase of plan implementation.

Option 1: (Figure 4.6)

- All turns are permitted directly from the main line at signalized intersections.
- Right turns are allowed from the access lanes, after stopping and yielding to main line turning vehicles.
- Vehicles in the access lanes may not turn left or continue straight through the intersection.

Note: Figures 4.5-4.7 are derived from Kimley-Horn and Associates, Inc. intersection graphic in Institute for Traffic Engineers, Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, March 2010.

Option 2: (Figure 4.7)

- Traffic on the access lanes is able to proceed through or turn right at an intersection under signal control, but not turn left.
- Right turns are not permitted directly from the main roadway to a side street.

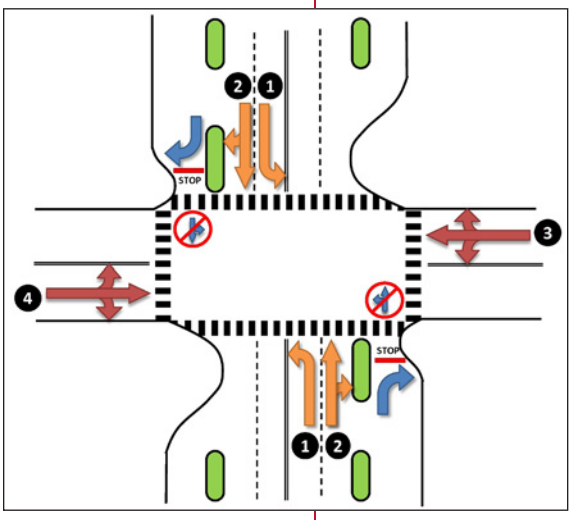

Figure 4.6: Intersection Option 1

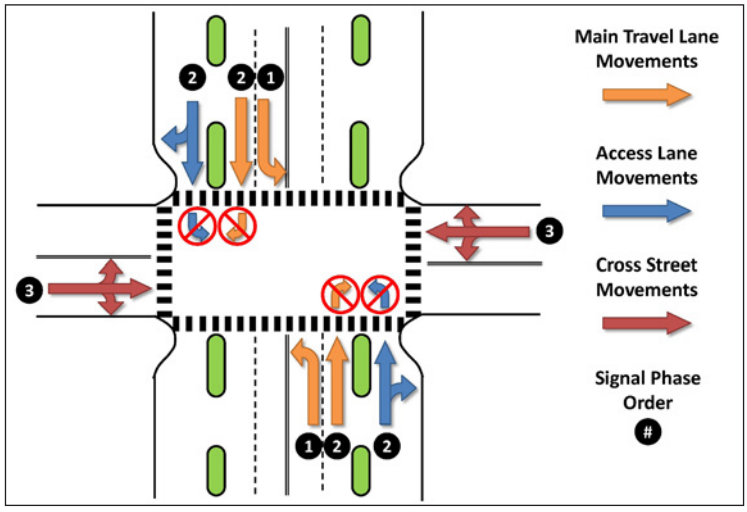

Figure 4.7: Intersection Option 2

[5] *Figures 4.5, 4.6 and 4.7 do not reflect the number of lanes for each function. These figures are only meant to show movement options. They are not reflective of the boulevard cross-section design.*

- To access a side street from the main road, traffic would enter the access lanes prior to the intersection or stay on the main lanes to make a left turn.
- Traffic on the access lanes going through the intersection up to the next entrance from the main lanes would yield to the traffic entering the access lanes.
- Traffic can exit the access lanes at a designated exit point prior to the next signalized intersection.

2. EXPAND THE STREET NETWORK

Expanding the street network will increase connectivity and movement choice within the plan area, diffuse traffic congestion, space intersections for more frequent and convenient pedestrian crossing opportunities, and create a regular pattern of developable urban blocks. The proposed alignments for new and extended streets are shown in Figure 4.8, the Street Master Plan. The Street Master Plan will require the construction of new streets as development occurs along the corridor, but the general locations and alignments shown are illustrative and could be changed based on specific development proposals and engineering data.

Recommendations for the expanded street network in the South, Middle, and North Pike are described below.

South Pike

The South Pike offers a good opportunity to expand the corridor's street network because of the existing large blocks. Major road recommendations for the South Pike are shown in Figure 4.9 and described below.

Chapman Avenue Extension

The key transportation element in the South Pike, on the east side, is extending Chapman Avenue north to one block beyond Congressional Lane (as shown also extended in Figure 4.9) and creating a grid connecting Rockville Pike and Chapman Avenue. This extension of Chapman Avenue will improve circulation and provide an alternative to using the Pike for local trips. The extension does not continue north through the entire corridor because of the dimensional constraints on properties on the east side of the Pike. Instead, it would end at a new east-west street that would cross the Pike and connect to East Jefferson Street.[6]

The alignment of the Chapman Avenue extension that was recommended in the 1989 Rockville Pike Plan only anticipated development on the west side of Chapman, but explicitly endorsed that the final alignment could be adjusted. The alignment for the first segment of this extension was adjusted in 2011 in the context of the approval of a development project. Through negotiations with other affected

[6] *South of the City border, Chapman Avenue is a private street. A southward extension of it will likely be a transportation network discussion in the context of Montgomery County's White Flint 2 Sector Plan, which is underway now. The Rockville's Pike Plan supports extension of this road to the south to improve connectivity.*

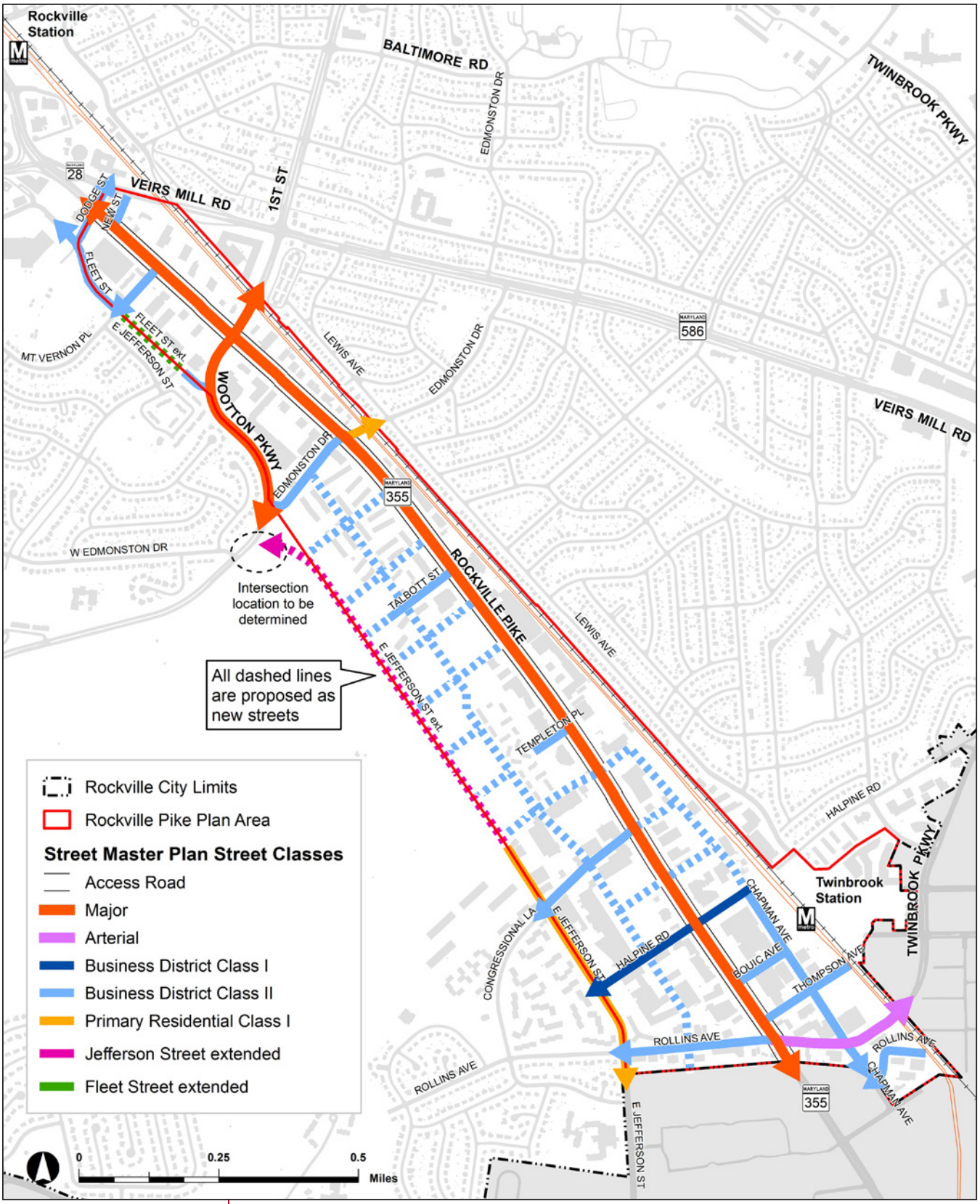

Figure 4.8: Street Master Plan

property owners, a revised alignment that allows development to occur on both sides of the road was conceived and approved. This level of flexibility is appropriate for the street network proposed in this plan.

Other street network

A north-south street is recommended west of the Pike, between the existing Jefferson Street and the Pike, which would continue through the Middle Pike to Edmonston Drive. Other streets would add connections between the east and west sides of the Pike and create smaller blocks. Congressional Lane is shown connecting Rockville Pike and Chapman Avenue extended, and a new street is proposed between Congressional Lane and Halpine Road.

Figure 4.9 is illustrative only. As elsewhere in the Plan Area, the recommended street alignments could be altered based on specific development proposals and engineering data.

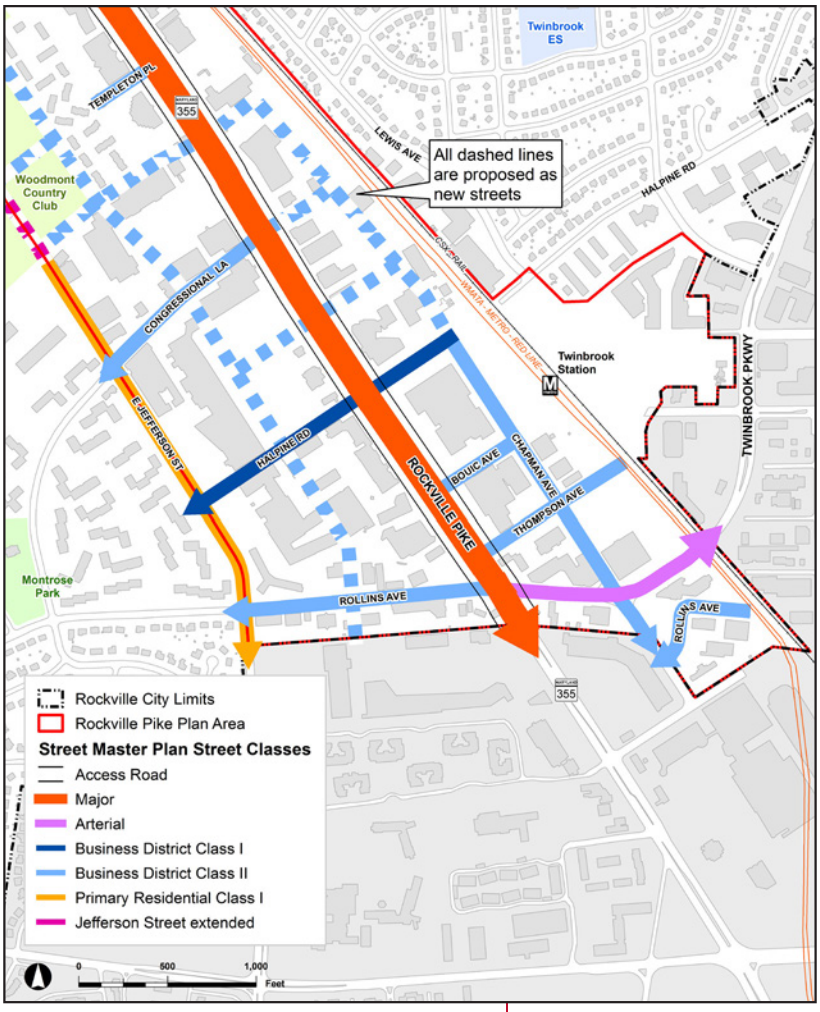

Figure 4.9: South Pike Street Master Plan

The Middle Pike

This section of the corridor currently contains the fewest roadway connections, but it has the opportunity to add the most road network, on the west side of the Pike. This plan's approach to improving connectivity, given the unique conditions of the Middle Pike, are discussed below.

The East Jefferson Street Extension

The most important transportation element for the Middle Pike is the extension of East Jefferson Street from where it currently ends, just north of Congressional Lane, northward to Wootton Parkway (as shown in Figure 4.11 on page 4-15). Because it would offer a parallel alternative to Rockville Pike, this extension would alleviate some of the congestion on the Pike, such as at its intersections with Congressional Lane and Twinbrook Parkway, both of which are highly congested at peak times. The East Jefferson Street extension should be considered in conjunction with any development or redevelopment that produces a significant impact on these intersections.

The conceptual cross-section, shown in Figure 4.10, includes two travel lanes (one in each direction), bike lanes, on-street parking, tree lawns, a sidewalk on the

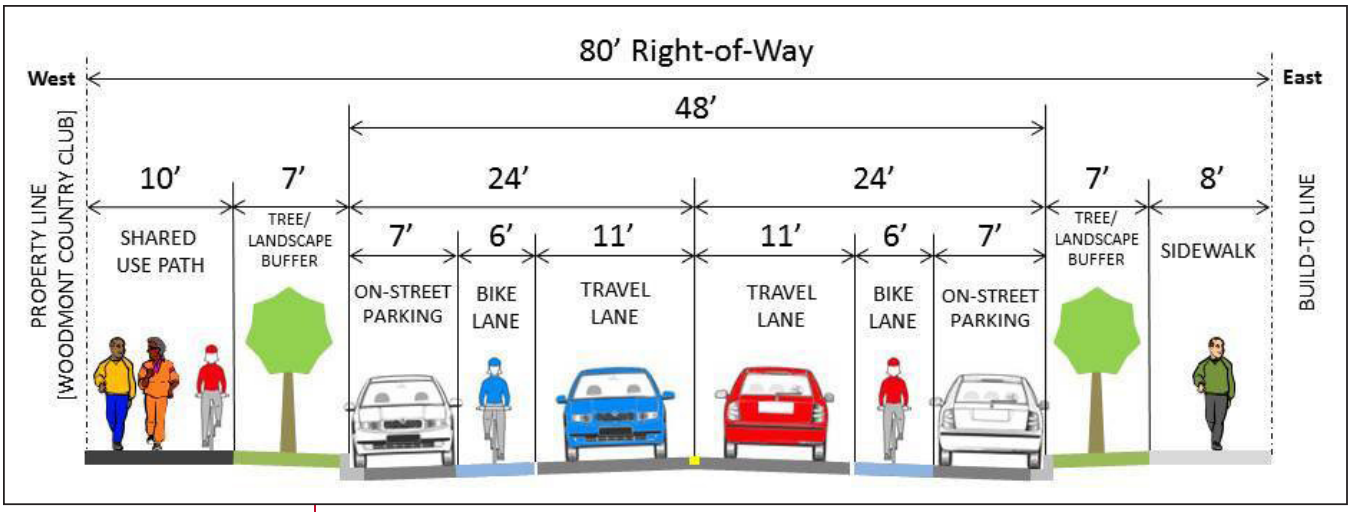

Figure 4.10: *E. Jefferson Street Conceptual Street Section*

east side, and a shared use path on the west side. These road components are consistent with the City's "Complete Streets Policy," which was adopted in July 2009. Complete streets provide facilities for all users, including pedestrians, bicyclists, transit users, and motorists, to the extent appropriate for the land use or the context of the street.

This cross-section design assumes development only in the Rockville Pike plan area. Should the road be built in the context of a larger-scale development on the Woodmont Country Club site, it would be appropriate to re-evaluate the cross-section. In any case, the street should conform to the City's Complete Street Policy.

Added street network improves walkability and connectivity.

Incorporating these components into the design of the Jefferson Street extension would not only add multi-modal capacity, it would strengthen connections between existing bicycle and pedestrian infrastructure at the north and south ends of the Pike corridor. The Millennium Trail along Wootton Parkway and the Bethesda Trolley Trail are two of the key bicycle and pedestrian connections throughout central Montgomery County. While implementing the multi-way boulevard design for Rockville Pike is an important step in linking the Pike to these two facilities, a future extension of Jefferson Street should further accommodate cyclists and pedestrians in making the link.

The cross-section and alignment shown in this plan are for illustrative purposes only. The exact dimensions, operating characteristics, and alignment of the extension and its connection to Wootton Parkway will be determined based on conditions at the time of implementation, including development proposals and the area's geography. Under all circumstances, however, the alignment and road design should be protective of existing residences and sensitive to the Club operations.

Added Street Grid between Rockville Pike and the Jefferson Street Extension

Figure 4.11 conceptually illustrates the recommended street additions in the Middle Pike. It shows a grid of approximately equally dimensioned blocks, roughly four acres in size. This is consistent with the land use section of this chap-

ter, which establishes that block faces be no longer than 500 feet in length without an alley, common drive, access easement, or pedestrian pathway providing through access. Blocks should also be no larger than four acres, or 1,600 feet in total perimeter.

This approach will help to achieve the goal of creating developable blocks in a more pedestrian environment. The grid respects existing property lines and buildings where feasible, but it is expected that this network would be built only in conjunction with owners redeveloping their properties, in which case current building locations may be irrelevant.

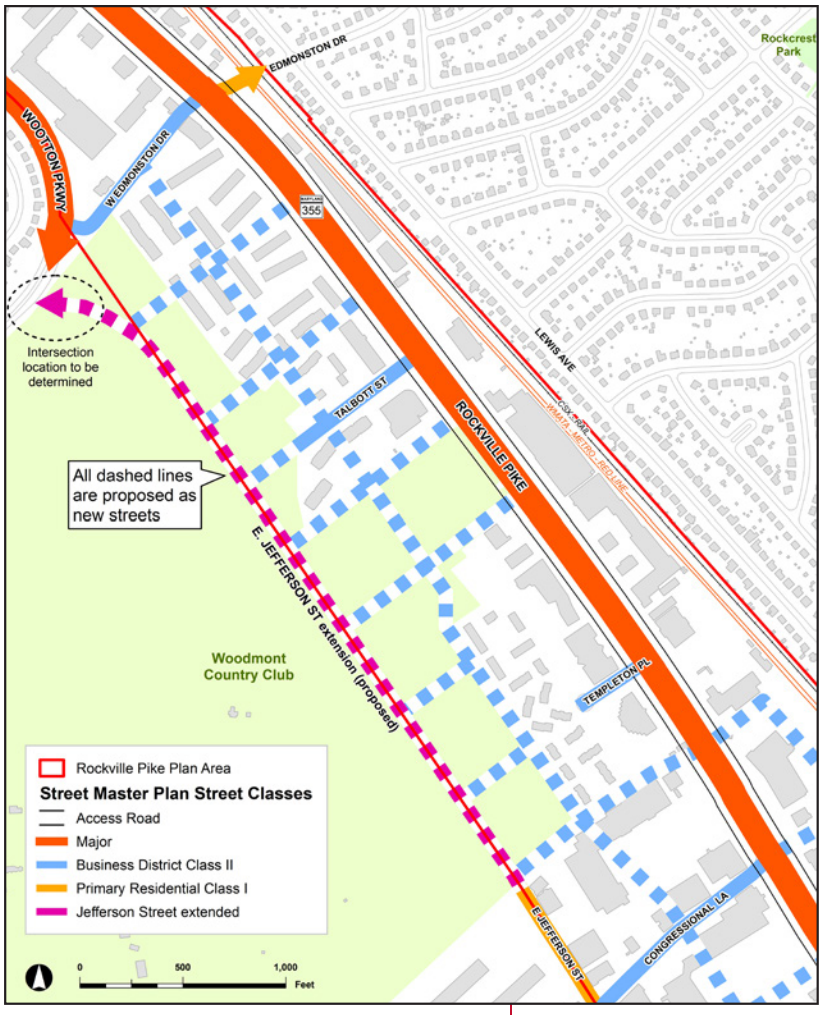

Figure 4.11: *Middle Pike Street Master Plan*

The Middle Pike street grid follows the north and south property lines of the Woodmont Country Club entrance fronting Rockville Pike, which would allow that property to be developed intact as a single project without crossing property lines or being bisected by a street. It also aligns a north-south street between the Pike and the East Jefferson Street extension at the rear of the Woodmont Overlook townhouse complex, as this residential area is not expected to be redeveloped during the timeframe of this plan.

The new roads are required; however, alignments of all of these streets, as with the Fleet Street and Jefferson Street extensions, are flexible and may be adjusted based on actual development programs. Sensitivity to existing residences and businesses will always be an important consideration in determining the final alignments. Compliance with the City's regulations on road dimensions, which can be found in Chapter 21 of the City Code, is also important. This plan is being completed in conjunction with an effort to update this portion of the Code, to result in consistency between the two. This is discussed further under the section "Adhere to the City's Complete Streets Policy," which follows.

Middle Pike - East Side

There are no recommendations for added street grid on the east side of the Middle Pike because of the narrowness of this portion of the Plan Area. New signalized intersections, added street grid on the west side, and flexibility for the access road design on the east side, as previously discussed, will help to provide some circulation choices.

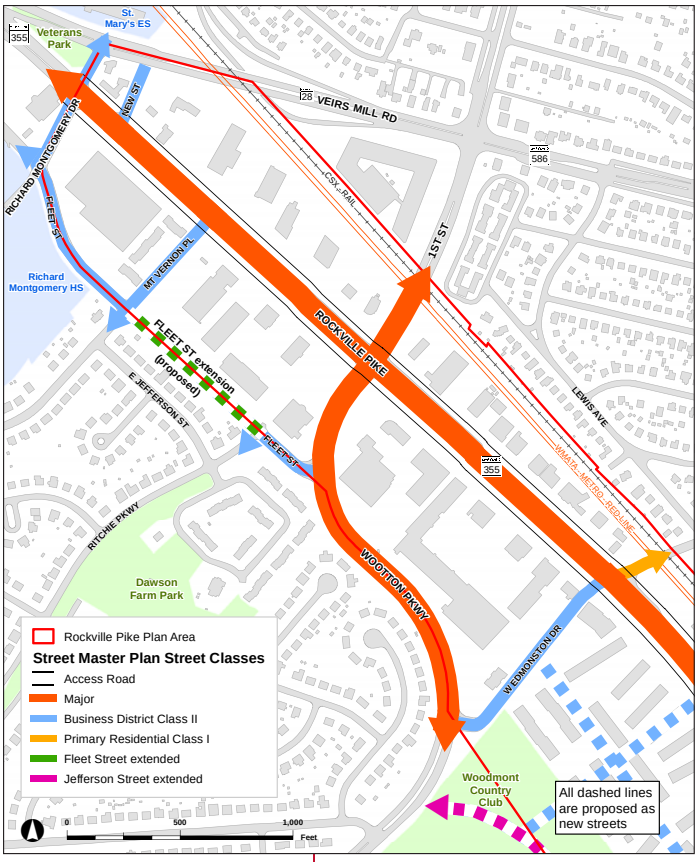

Figure 4.12: North Pike Street Master Plan

The North Pike

Fleet Street Extension

The primary street addition in the North Pike is a two-lane extension of Fleet Street to connect Wootton Parkway and Mt. Vernon Place and to provide a circulation alternative to Rockville Pike, as shown in Figure 4.12. This extension was previously recommended in the 1989 Rockville Pike Plan as a four-lane business district road and in the 2002 Comprehensive Master Plan. This plan keeps the possibility of such a link intact depending on future circulation needs of the neighborhood, though the function and parameters of this extension have been significantly downsized in recognition of community concerns.

This short connection would provide an alternative to the current approach used to avoid the frequently congested Wootton Parkway-Rockville Pike intersection – that cuts through the Hungerford neighborhood on Ritchie Parkway, East Jefferson Street, and Mt. Vernon Place. It also would offer some relief to the intersection of Wootton Parkway and Rockville Pike by providing a non-neighborhood alternative to accessing Richard Montgomery High School, City Hall, and County buildings in the Town Center area. The 80-foot right-of-way for the proposed alignment is already dedicated to public use as an improved shared-use path and accommodates underground water and sewer lines.

The design for the Fleet Street extension must ensure safety and protection for abutting residences and for students.

This plan recognizes that there is concern about safety if this road extension is built, particularly for students at the high school. In response, this plan recommends that the Fleet Street extension be reduced from previous recommendations for a four-lane road to a two-lane road (one lane in each direction), with street parking and a sidewalk on the east side, a path for walking and biking on the west (Hungerford neighborhood) side, and tree lawn on both sides. The design for, and operation of, this extension must encourage vehicles to travel at safe speeds by using traffic calming measures to maintain safety for pedestrians.

In the vicinity of the high school, measures such as those used at Wootton High School (which include a fixed speed camera, a speed indicator signal and additional traffic signals) should be among those considered. Decisions regarding the exact measures that are deemed most applicable will be made in consultation with the Richard Montgomery High School community. A possible cross-section design, which also takes into consideration locations of existing water and sewer lines, is shown in Figure 4.13; however, further input from the community should be sought before a final design is determined.

The goal is to keep Fleet Street and its extension a low-speed road even with increased traffic, including the new traffic along the extension. There is also the

need for mitigation for abutting residential properties. Ensuring a sufficiently protective buffer, preferably green, (such as trees or a berm as opposed to a constructed barrier or wall) for the Hungerford neighborhood houses that back up to the extension right-of-way will also be an important consideration of the road design. The current backyards of the properties that abut the extension on the west side will always be considered backyards and not street frontages for zoning purposes. The goal is to continue to treat these properties consistently with the rest of the Hungerford neighborhood regarding setbacks, fencing, etc. No vehicular connections will be allowed from these properties to the Fleet Street extension.

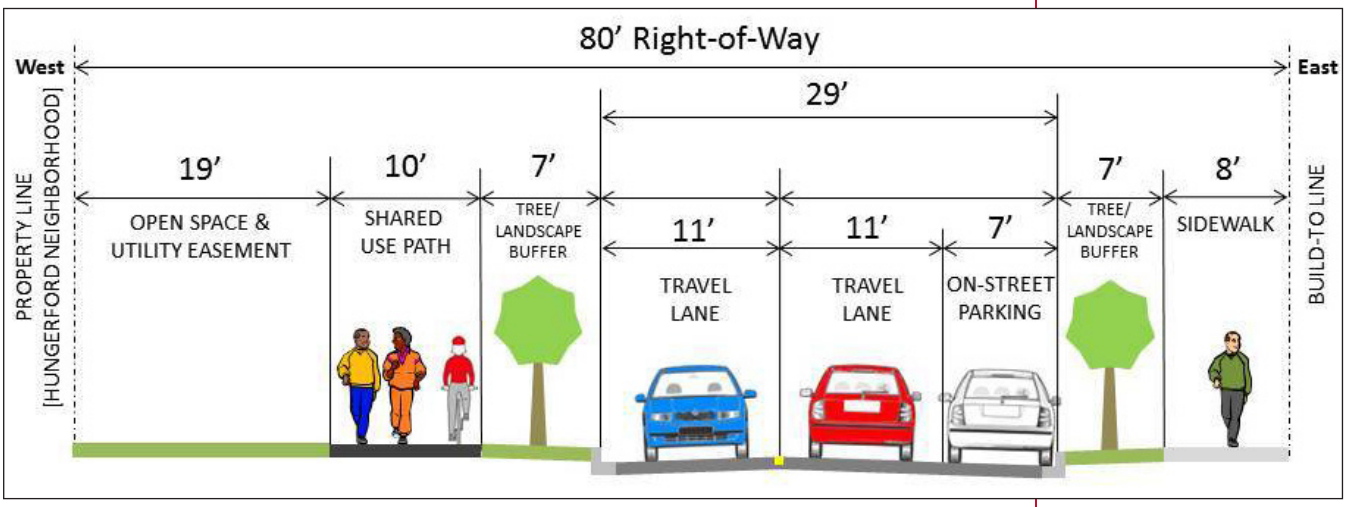

Figure 4.13: Fleet Street Conceptual Street Section

East-West streets

East-west streets would be added in the North Pike if the owners of the shopping center (currently called the Ritchie Center) and auto dealership, which are located immediately east of the proposed Fleet Street extension, intend to redevelop. These streets could provide access to new development from Rockville Pike or Fleet Street and would help to break down block sizes, which is an important land use goal, as discussed later in the land use section of this chapter.

3. ADHERE TO THE CITY'S COMPLETE STREETS POLICY[7]

Streets in the Rockville Pike Corridor will conform to the City's Complete Streets Policy.

The boulevard features of Rockville Pike have been described above. The Street Master Plan shows other street types within the Plan Area, specifically Business District Class I and Business District Class II streets (Figures 4.14 and 4.15). These streets conform to the City's Complete Streets Policy in that they include features that create a multi-modal-friendly environment that accommodates all road users to the extent appropriate for the land use or the context of the street. The Business District Class I and II streets described here will be designed in accordance with

[7] *According to the National Complete Streets Coalition, "complete" streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities.*

Chapter 21 of the Rockville City Code, but their general characteristics are described below. Their wider sidewalks, landscape/tree buffers, and bicycle accommodations all contribute to the land use policies of this plan.

Halpine Road – Business District Class I Street

A Business District Class I street consists of two or more lanes in each direction and may be divided by a median. Halpine Road is identified as the only Business District Class I street in the Plan Area. It is an important road in that it provides a connection across Rockville Pike to the Twinbrook Metro Station. Halpine's current road design and width changes from the west side of the Pike to the east side: it is a multi-lane road that is divided by a median west of the Pike, but not east of the Pike; and it has on-street parking only east of the Pike. Halpine will likely continue in its current configuration in the near term, as existing buildings prevent any significant changes. Extensive redevelopment, however, would prompt the City to implement the full Business District Class I street design shown in Figure 4.14. Additional right-of-way would need to be obtained. As recommended in this plan, the Halpine Business District Class I street would be a multi-lane, divided roadway with dedicated bike lanes, wide sidewalks and landscaped buffers between the bike lane and the sidewalk. On-street parking also could be included if needed.

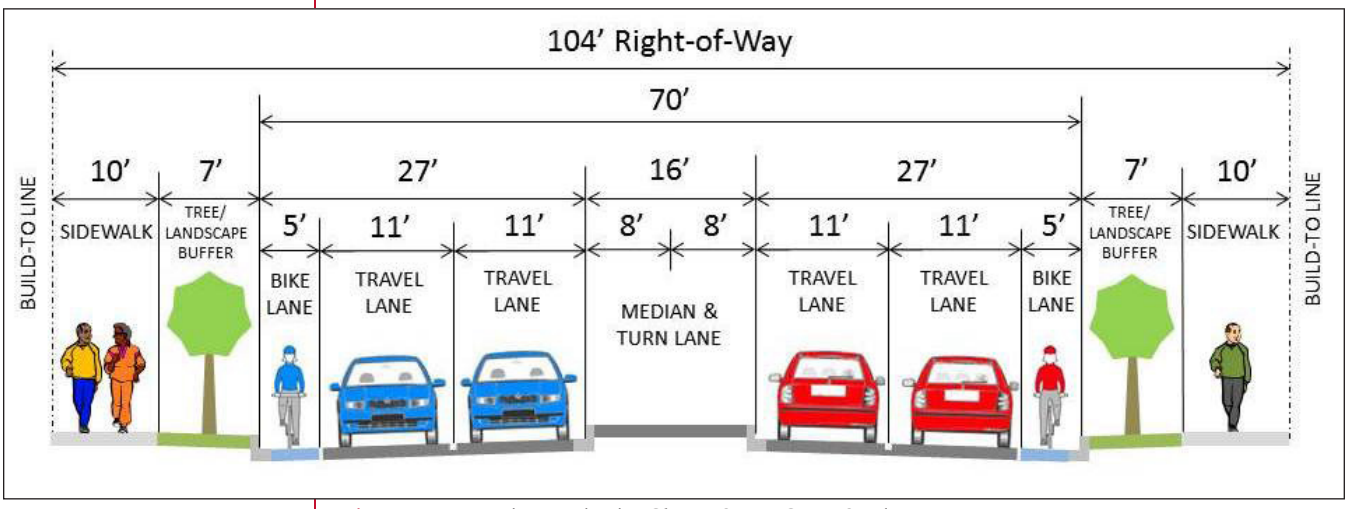

Figure 4.14: *Business District Class I Street Cross Section*

Business District Class II Streets

A Business District Class II street consists of one lane in each direction and is not separated by a median. Most of the streets within the Plan Area, both existing and proposed, are identified in the Street Master Plan as Business District Class II streets. These streets are undivided roadways with one travel lane in each direction, as well as on-street parking, sidewalks and buffer areas between the sidewalk and parking lane. Bicycle facilities (such as bike lanes or shared use paths defined with sharrow symbols[8]) may also be included on Business District Class II streets, as directed by the City's Bikeway Master Plan.

[8] *Sharrow symbols are pavement markings that indicate that bicyclists may share the lane.*

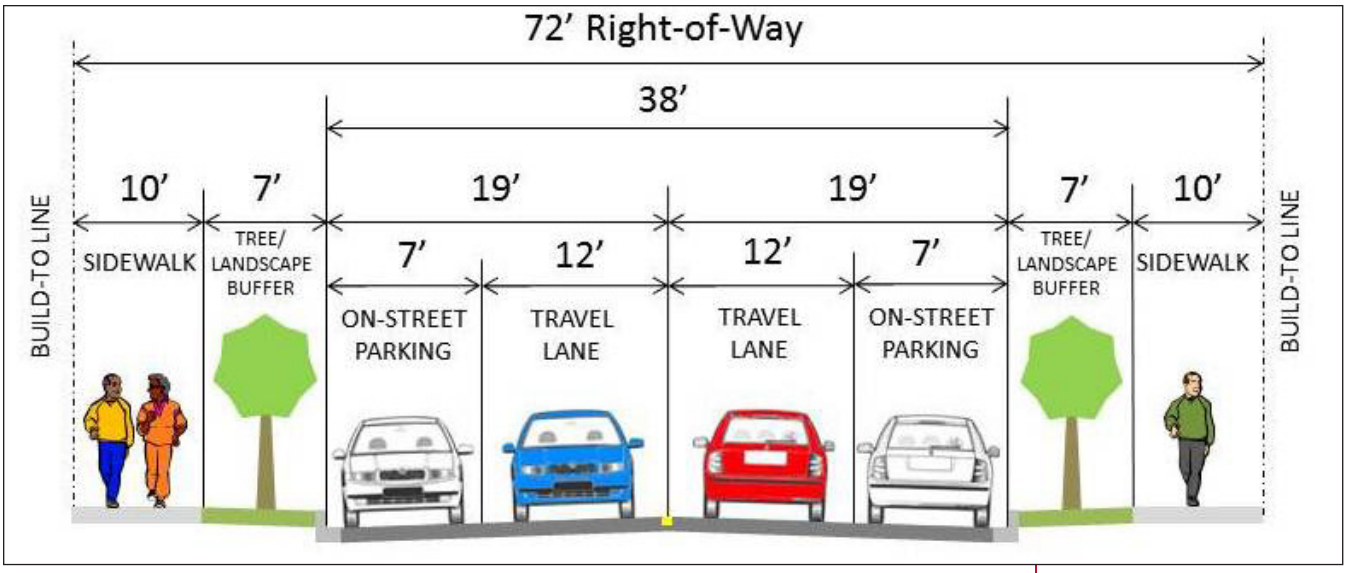

Figure 4.15: Business District Class II Street Cross Section

This plan establishes that the City take advantage of opportunities to upgrade all Business District Class II streets to the standards provided by this plan.

Other Streets

Other roads in the Plan Area include residential (East Jefferson Street) and existing arterials (First Street and Wootton Parkway, west of Rockville Pike).

4. OPTIMIZE ACCESS TO AND USE OF PUBLIC TRANSIT

The Rockville Pike corridor is currently served by a combination of transit routes and modes. Ride On buses provide local and county-oriented service, while Metro bus and rail serve the larger metropolitan area. The provision of safe, reliable, and convenient transit is critical to providing a more robust suite of travel options in the corridor, which will also reduce pressure on automobile infrastructure.

Metrorail

The proximity to the Metro Red line and the location of the Twinbrook Metro station are significant assets in this corridor, whose value will only increase over time. However, capacity issues must be addressed because new development and modal shift will put added pressure on the system. Planning initiatives to the north and south of Rockville also assume increased transit use and the same modal shift goals. This plan advocates for the full utilization of Metro's Red Line in terms of extending all northbound service to the Shady Grove station, providing minimum safe headways, and maximizing the number of cars on trains as needed to accommodate the anticipated increase in use within and outside of Rockville. The Twinbrook Metro station should be integrated into the corridor by providing good pedestrian and bicycle access and adequate bicycle storage.

Other Rapid Transit

The currently proposed countywide Bus Rapid Transit (BRT) system, and the proposed Rockville Pike BRT route in particular, have the potential to yield an enormous impact on the corridor and the share of travel accommodated by transit. The City should continue to participate actively in discussions regarding any BRT system. If such a system is to be implemented, Rockville should solicit support for at least one BRT stop in the Middle Pike, because that section of the Plan Area is least accessible to Metrorail, in addition to stops near Metrorail stations to ensure that the transit systems integrate. The City should also advocate for bicycle parking at or near BRT stations.

Local Buses

It will be particularly important, as the City moves toward a more multi-modal environment, to ensure that local service is not only retained, but improved, for people within the corridor as well as those using it to access the corridor from other neighborhoods. Rockville should participate fully in any discussions of re-routing local bus service in the context of adding a new transit service. If BRT plays a regional role, Rockville will need to ensure that it does not displace local service and that the local bus service increases to serve everyone, particularly those who are not within walking distance of the BRT or Metro. Consideration should also be given to providing a local bus or shuttle service that would connect Rockville's commercial nodes.

A goal is to produce inviting public spaces.

The public transportation that is available today does not offer adequate service to provide a practical alternative to people driving vehicles to and from most residential locations in Rockville. Strong consideration should be given to developing a system of local shuttles that routinely circulate through routes that link the Plan Area to other parts of the City and for which a largely sustaining demand can be generated over time.

PRINCIPAL LAND USE POLICIES

This section describes the land use vision for the Rockville Pike Plan Area, provides guidance for its implementation and direction for future revisions to regulatory documents. The vision is for a livable, desirable, and economically vital environment defined by thoughtful urban design, multi-modal transportation, active public spaces, and green spaces.

During the planning process for Rockville's Pike, the concept of transforming the Plan Area into a more appealing environment for walking generated the strongest and most consistent support from public participants. Making the corridor walkable renders stores and other destinations more accessible to everyone - bus riders, drivers, pedestrians, bicyclists, and transit users - because walking becomes at least a part of every trip, even if it is just from the bus stop to one's apartment or from a car to one or more destinations.

The transportation improvements recommended earlier in this chapter will help to improve the safety of pedestrian and bicycle experiences by separating

travel modes and creating a more finely developed street network. These improvements need to be supported by intentional design that will also help to make walking and biking pleasant, create a distinctive corridor and new urban neighborhoods. This plan's land use recommendations are in service of this goal.

While enhancing the pedestrian environment is an important goal, this plan acknowledges that the character of the Rockville Pike corridor is not, and should not be, the same for the entire two miles. Different parts of the corridor contain their own set of unique characteristics, land use and economic conditions, and related challenges and opportunities. These factors have an impact on how the plan addresses land use solutions and how future growth may be accommodated.

As noted earlier in the Principal Transportation Policies section of this chapter, the east side of the Pike, in the North and Middle sections of the plan area, presents specific challenges. This area, due to its narrow geographic configuration, wedged between the railroad tracks and the Pike, has limited potential to achieve some of the objectives that are desired for the South and West Pike, such as multi-story buildings and a highly pedestrian environment. The economics of development could change here, however, if a BRT line is built along the Pike or if the west side of the North and Middle Pike becomes activated through redevelopment.

The vision is for a livable, desirable, and economically vital environment.

Principal land use policies of this plan include the following:

1. Seek to ensure a comfortable and functional relationship between public infrastructure and the private built environment
2. Require buildings to be adjacent to sidewalks
3. Regulate building height by location
4. Create smaller blocks
5. Provide wide and pleasant sidewalks
6. Enhance the pedestrian environment overall and especially at strategic intersections and on strategic streets
7. Ensure a mix of uses
8. Ensure adequacy of public facilities
9. Encourage enduring, human-scale architecture that has visual interest
10. Provide parks
11. Require the creation of public use space through redevelopment
12. Promote development which, at a minimum, does not degrade existing environmental conditions
13. Strategically locate and right-size parking

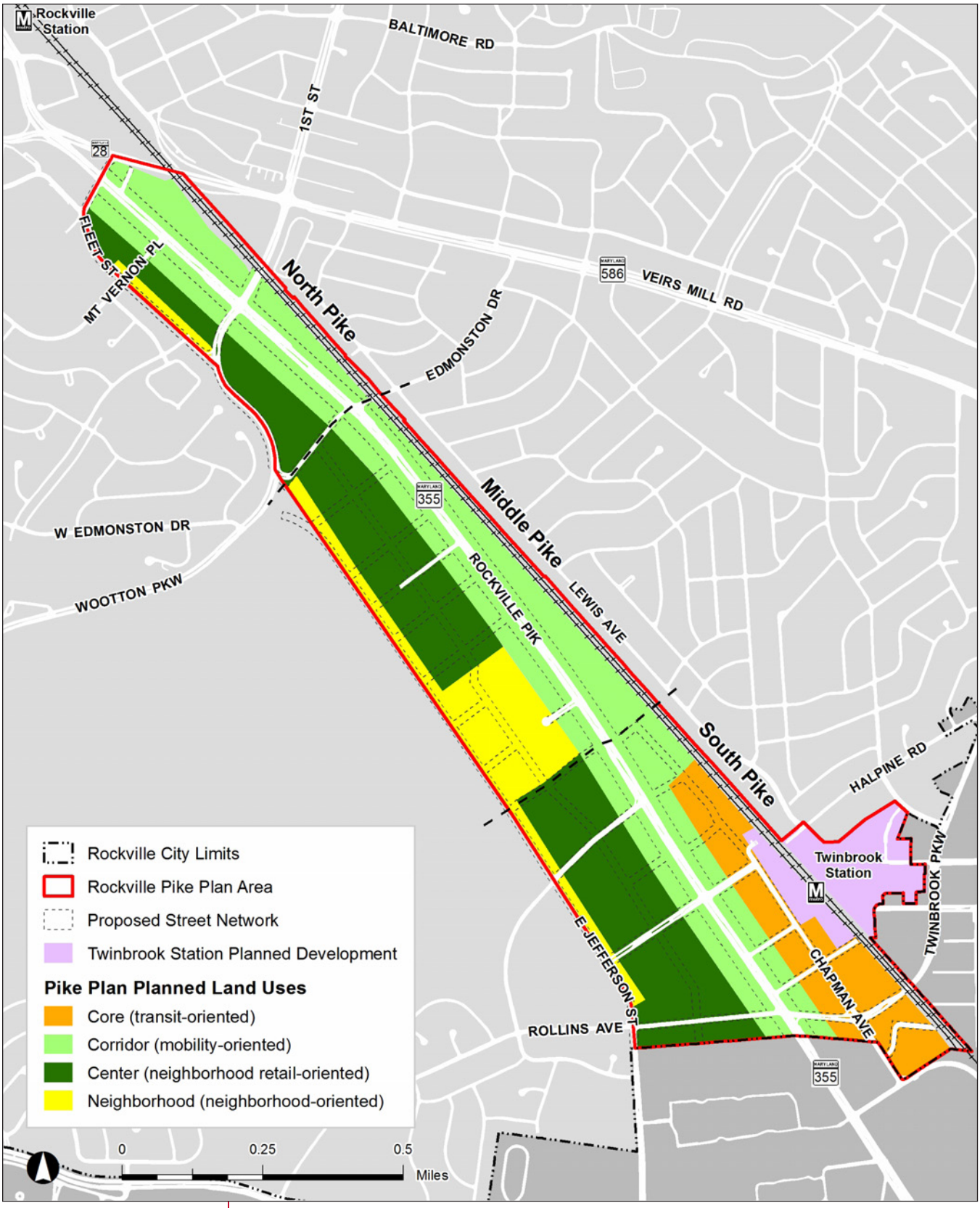

Figure 4.16: *Land Use Plan*

1. SEEK TO ENSURE A COMFORTABLE AND FUNCTIONAL RELATIONSHIP BETWEEN PUBLIC INFRASTRUCTURE AND THE PRIVATE BUILT ENVIRONMENT.

This plan addresses the relationship between building facades and public infrastructure, the form and mass of buildings in relation to one another, the public spaces formed by the disposition of buildings, and the scale and types of streets and blocks. This physical form approach emphasizes the built environment and the public realm's character with the goal of producing inviting public spaces. At the same time, it allows flexibility for the uses and activities that occur behind the building facade. The emphasis on form and scale means that a variety of uses can be allowed and mixed, as long as they conform to specified physical requirements.

The land use plan provided in Figure 4.16 divides the Plan Area into four land use designations: Core, Corridor, Center, and Neighborhood. These designations provide guidance for building standards and other development regulations that are provided in the Rockville Pike District (RPD) Code.

Some areas will support a very active pedestrian environment, made possible by easy access to multiple transportation modes and a mix of uses. Most of the South Pike, east of Rockville Pike, is identified in the land use plan as the **"Core"** area. The Core is where the highest density should be encouraged, by 1) allowing the tallest building heights in the Plan Area, 2) requiring that the majority of building facades be located at the sidewalk, and 3) not permitting the construction of single-story buildings, other than accessory buildings.

The location of buildings next to sidewalks structures the environment for pedestrians.

The land use plan identifies all of Rockville Pike as the **"Corridor"**. However, building placement, height, and form standards should be refined to reflect the different characteristics of the South, Middle, and North Pike and the east and west sides. Maximum building heights should allow for a coherent look along the length of the boulevard. Lower heights should be mandated on the east side of the Middle and North Pike where parcels are located proximate to existing Twinbrook houses on Lewis Avenue. As in the Core, the majority of any building façade in the Corridor should be located at the sidewalk.

A **"Center"** designation is appropriate for locations where a similar, but less intense, development character to the Core and Corridor is desirable. These areas support an active pedestrian environment and a mix of uses, including retail, that primarily serve the surrounding neighborhood, but maximum building heights are lower than in the Core and the Corridor.

"Neighborhood" areas are more conducive to serving residential uses of varying scales, styles, and densities, with some inclusion of business services. Maximum building heights are the lowest in the Neighborhood areas.

2. REQUIRE BUILDINGS TO BE ADJACENT TO SIDEWALKS

This plan establishes that buildings will be constructed adjacent to public sidewalks, to frame the public realm, structure the environment for pedestrians, and position pedestrians where land uses are located (in contrast to the 1989 *Rockville Pike Corridor Neighborhood Plan* where sidewalks were separated from land uses). Building facades create an edge that helps to define public and private space, minimize ambiguous spaces, and establish an appealing place.

A continuous, yet varied, edge can be achieved by establishing a "build-to" line at the sidewalk on all streets within the Plan Area, and then requiring a certain percentage of building façade to be placed at that build-to line. While 100% of all facades of all buildings may be placed right at the build-to line, the percentage that is required to be at the build-to line should vary throughout the Plan Area, depending on the volume of pedestrian activity expected and desired.

The tallest buildings are allowed near the Twinbrook Metro station, while less building height is allowed near existing residential neighborhoods.

Providing a clear delineation of public versus private spaces with a build-to line reduces the number of areas that are not obviously public or clearly private. Examples of such spaces are sprawling parking lots. People are often uncomfortable in these spaces, particularly when other people are not around; and they are always difficult places to walk.

All street-fronting building facades should be allowed to step back a small amount from the build-to line to allow for bay windows and other façade articulation on buildings, planters, stoops, stairs, etc. without encroachment into the public realm.

The lowest floors of a building are most important to providing street level activity as well as a sense of enclosure and human scale. For these reasons, the minimum percentage of building required at the build-to line should be applied only to the first two floors. Developers are given flexibility as to how they will achieve this goal. For example, if 70% of the building is required to be at the build-to line, 100% of the ground floor could be placed at the build-to line and only 40% would be required at the second story level, or vice versa. Other permutations would be allowed, as long as the average percentage required for a particular land use area is achieved by the first two floors.

The highest proportion of building façade at the build-to line is recommended for buildings that face Rockville Pike and streets that are closest to the Twinbrook Metro Station where pedestrian activity, and associated retail uses, is anticipated to be high. It is important for these buildings to frame the street and provide a sense of spatial enclosure.

Lower proportions of building façade at the build-to line should be required where pedestrian activity is expected to be less, such as areas with the Neighborhood land use designation. A more flexible requirement in these areas allows for residential driveways and small front yards and will allow more "private" uses to be set back from the street.

In all cases, any lot section along a build-to line that is not defined by a building should be defined by a wall, vegetation, or some other delineation to continue

the clear edge to the street-space where the buildings do not do so. A change in paving material or color may serve this purpose when a commercial or residential driveway meets a sidewalk.

The build-to line is zero feet from the back of sidewalk for all streets within the Plan Area, except along the east side of the Pike in the North and Middle Pike where the formal access road is not required, meaning that there may not be a public sidewalk at the front of buildings. If the public sidewalk is located adjacent to the Pike, there must be a buffer between the sidewalk and the travel lanes. There the build-to line is defined as 116 feet from the Pike centerline; it is 126 feet from the Pike centerline for all other Pike fronting properties. Properties adjoining the west side of the existing and proposed East Jefferson Street segments are located outside of the Plan Area and their setbacks from E. Jefferson Street would not be determined by this Plan.

No side or rear setback is required anywhere in the Plan Area, but if a side or rear setback is provided, there should be a minimum setback established to allow access for maintenance, etc.

3. REGULATE BUILDING HEIGHT BY LOCATION

Building Heights

Layback slopes help to protect residential areas.

The height limits established for buildings in this plan are intended to serve walkability and economic development objectives by permitting sufficient mixed-use density to create vitality, while responding to community concerns about over-development and maintaining a human-scale environment. Considerable public testimony was received on the subject of building heights and density. As a result, the Planning Commission formed a sub-committee to focus specifically on this issue and to substantiate the plan's approach to building heights. The approach, as expressed in the following paragraphs, is the result of the extensive public comment, as well as adherence to Smart Growth principles and the vision statement expressed in the 2002 Comprehensive Master Plan (see side note on page 1-1). Maximum heights also address concerns about development's potential impacts on quality of life, identity, atmosphere, public facilities, density, and vacancy. While this plan provides a framework for policies on building heights in different parts of the Plan Area, the regulations for building heights are contained in the Zoning Ordinance.

Different height standards are appropriate for different parts of the Plan Area. This plan recommends that buildings fronting Rockville Pike have variable, but generally mid-rise, heights to frame the wide boulevard and provide an opportunity for a vertical and horizontal mix of uses.

Taller buildings are acceptable in the Core, close to the Twinbrook Metro Station, particularly if occupied by non-residential uses that could complement the multifamily dwelling units that are currently planned near the Metro station, and where strong potential exists for creating the type and intensity of uses that serve and promote transit.

Community input to the planning process suggests that no more than 10 sto-

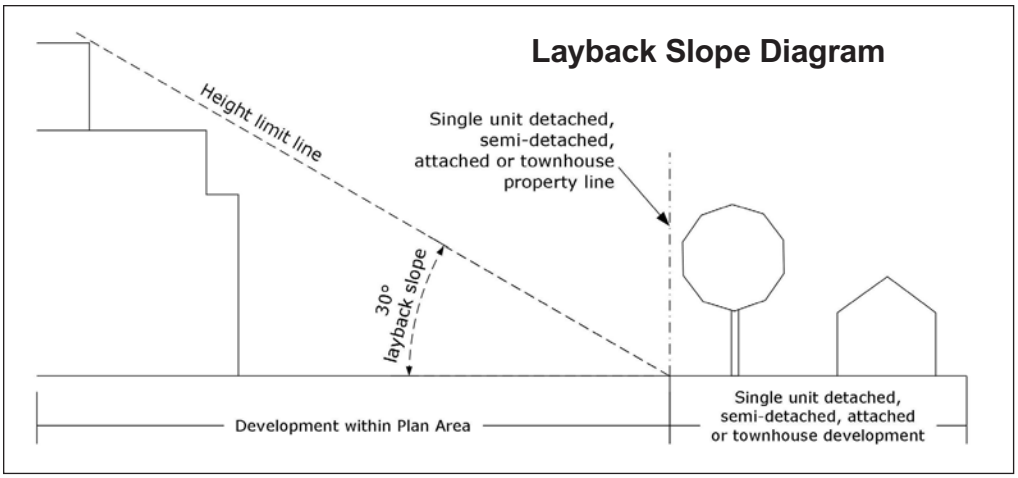

Figure 4.17: *Per 25.13.05.2(d) of the City Code, a layback slope is a line beginning from the closest ground point of the lot line of any property in a residential zone measured at a 30-degree angle, within which no building can exceed in height.*

Creating smaller blocks can be most readily accomplished in the South Pike and on the west side of the Middle Pike.

ries is suitable for Rockville within proximity of the Metro station. The maximum potential height of buildings should taper down towards the west side of the Plan Area and be lowest in the proximity of existing residential uses. Zoning that generally adheres to these objectives should be considered compliant with this plan.

Building height should be measured in stories. Regulating height by stories is likely to result in greater variation because ceiling heights, interstitial space between floors, and roof forms will be different among buildings. There will be more incentive to design diverse roof slopes because they will not count against maximum height. Variation of building heights provides greater visual interest than rows of buildings that are all at the same elevation.

Layback slopes (see Figure 4.17) should be used to protect residential zones inside and outside of the Plan Area where single-unit detached, semi-detached, attached, or townhouse development exists or such development is recommended, without regard to intervening roads or other transportation facilities, including railroad and Metrorail right-of-way.

In particular, a layback slope should be applied to any development fronting on the east side of the Fleet Street extension in order to protect the houses that back up to it in the Hungerford neighborhood. Layback slopes should also be applied to development in the Corridor frontage, on the east side of Rockville Pike, that is located across the tracks from residences on Lewis Avenue in Twinbrook. Layback slopes would not apply to development within the Core frontage of the South Pike.

Story Heights

Ground floors, in areas where retail is allowed and envisioned, should be designed and built to accommodate retail-type uses. This approach will allow retail uses to occupy the pedestrian-level space in the future, even if the market does not yet call for that use at the time of redevelopment. It will also make buildings better able to adapt to changing market conditions and more sustainable over time. Ground floors in areas that are not envisioned to have retail uses should not be required to be designed or built for retail in terms of a minimum ceiling height.

Maximum floor-to-ceiling heights should be established for ground and upper floors in all buildings to ensure that buildings cannot be excessively tall. However, the maximum floor-to-ceiling height should be flexible enough to accommodate a wide variety of uses. Established maximum ceiling heights would be a regulatory standard. However, if a specific desired use in a specific location has a higher height requirement; it could be approved by the appropriate approving authority, at that authority's discretion.

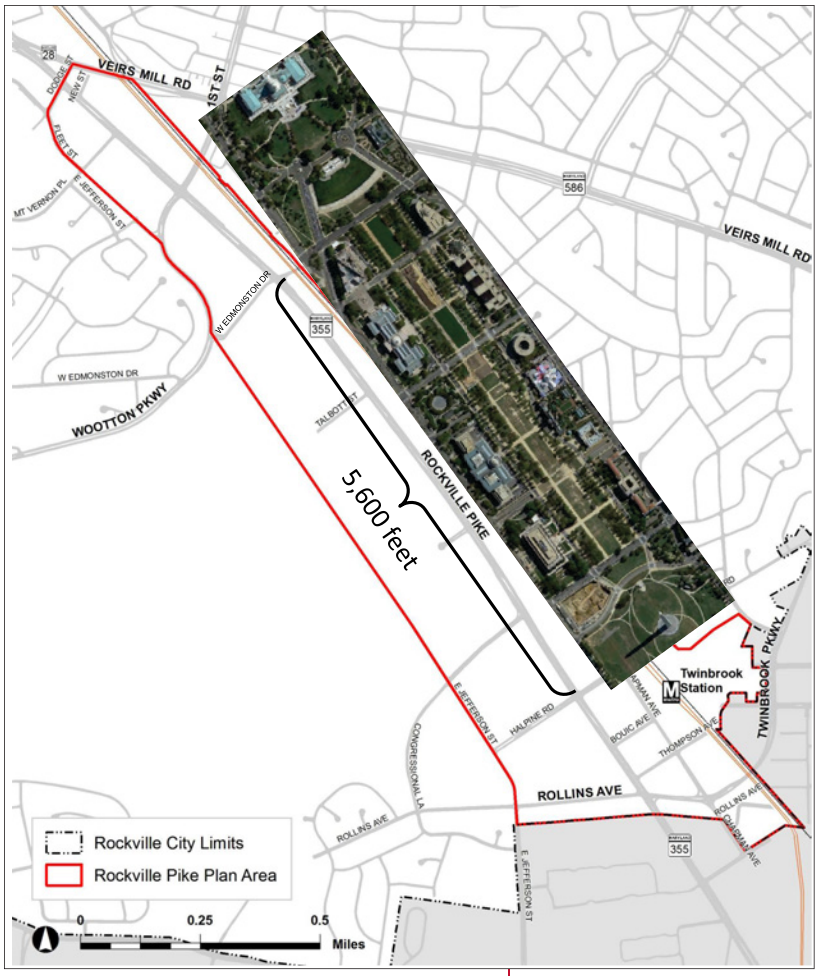

Figure 4.18: On the east side of Rockville Pike, there is a block length of 5,600 feet between Edmonston Drive and Halpine Road, almost as long as the National Mall in Washington, DC

Minimum Building Heights

A minimum building height of two stories is recommended for most of the Plan Area to encourage a vertical mix of uses and to help frame the streets. A two-story building maintains a street wall and will present a façade that is more consistent with this plan's vision than would likely be accomplished by a single-story building. Exceptions to this should be made for properties along the east side of the Middle and North Pike where highest and best use may continue to be limited to single-story buildings due to geographic and economic constraints; or for other limited site-specific reasons. Additionally, a three-story minimum is encouraged for the South Pike Core.

Accessory buildings are allowed throughout the Plan Area, but their height should be limited to a single story and their size, appearance and use should be clearly subservient to the primary building.

4. CREATE SMALLER BLOCKS

A traditional grid system of streets provides for shorter walking trips.

Since the mid-20th century, street networks in the U.S. frequently have been aligned to serve highways and high-speed traffic, resulting in declines in neighborhood connectivity and increased block sizes.[9] The Rockville Pike Corridor is an example, in that it features long blocks that restrict opportunities for pedestrian, bicycle and vehicular connectivity.

[9] *City blocks in older U.S. cities are typically shorter than 500 feet. Ewing, R. T. Schmid, R. Killingsworth, A. Zlot and S. Raudenbush. 2008. Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity. American Journal of Public Health Promotion, 18 (1): 47-57.*

On the east side of Rockville Pike, the alignment of the Metro line parallel to the Pike has limited the number of roadway access points, resulting in an extended block length of almost 7,000 feet between Edmonston Drive and the next intersection to the south at Halpine Road.[10] Another long block (approximately 1,500 feet) occurs between the intersections of Edmonston Drive and First Street with the Pike. Woodmont Country Club and Wootton Parkway create similar situations on the west side of the Pike.

Long blocks discourage walking. Studies have shown that blocks that are less than 500 feet in length create better walking conditions than longer blocks and can significantly improve pedestrian connectivity. Shorter blocks allow pedestrians selection of movement.

One of the keys to making a neighborhood walkable is having a traditional grid system of streets with good connectivity throughout the neighborhood and to areas outside the neighborhood. This approach provides for shorter walking trips and allows easy and efficient pedestrian access.

Rockville's Pike Neighborhood Plan recommends reducing the size of existing blocks as part of the redevelopment process, wherever possible and practical, by creating a more developed street network than currently exists. In addition to increasing connectivity and movement choices for all travel modes, reducing block sizes produces a regular pattern of developable blocks and increased street frontage for land uses, and provides access to new development. It also increases the likelihood that a resident, employee, visitor or shopper can access multiple destinations without needing to make additional vehicular trips; they can "park once" and visit several places. Improving the pedestrian environment in this manner is a key strategy for reducing automobile trips.

The sidewalk is the key component of a walkable neighborhood.

Creating smaller blocks can be most readily accomplished in the South Pike and on the west side of the Middle Pike. The network can be improved by extending north-south streets such as Fleet Street in the north, Jefferson Street in the Middle Pike, and Chapman Avenue in the south, as well as extending east-west streets such as Congressional Lane from Rockville Pike eastward to Chapman Avenue and streets that connect the Pike to East Jefferson Street. (The recommended street master plan for the entire Plan Area is shown in Figure 4.8.)

The east side of the Plan Area, north of Templeton Place to Richard Montgomery Drive/Dodge Street, has limited potential for added street network because of its wedged position between the Pike and the railroad tracks. As previously noted, some of the lots in this approximately ¾-mile stretch are only about 110 feet deep. As a result, this area may not have the same potential to become as pedestrian-oriented as the South Pike or the areas west of Rockville Pike. Pleasant and safe sidewalks certainly should be provided, but some of the amenities recommended for less constricted parts of the Plan Area should be reduced or eliminated on the east side. This will ensure that there is adequate land area to accommodate viable uses and adequate unstructured parking since auto access will likely continue to be predominant here for the forseeable future.[11]

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[10] *In this case, a "block" is defined as the area between two significant street crossings of the Pike.*
[11] *See the discussion of the modified boulevard access road recommended for the east side of the Middle and North Pike in the Principal Transportation Policies section of this chapter.*

Figure 4.19: *Existing Bicycle and Pedestrian Conditions – Rockville Pike's pedestrian environment is limited. Pedestrians encounter narrow sidewalks, sometimes only four feet in width, and complicated intersection crossings that present challenges to disabled persons.*

The sidewalk amenity zone is widest along the Pike.

This plan encourages the creation of streets or alleys, especially when a single block or large lot is controlled by a single owner or is developed at one time, when the opportunity to incorporate street grid is most feasible. Alleys help to maintain desired connectivity and movement choices. Like the local access roads that are recommended to run parallel to the boulevard, they can also reduce the number of curb cuts on streets by providing access to multiple buildings. Alleys improve vehicular and pedestrian circulation, safety, and attractiveness of parallel streets by allowing deliveries and trash collection to be diverted from the parallel streets to the alleyways. Alleys are encouraged to be incorporated into site plans wherever they can improve connectivity and reduce curb cuts on thoroughfares.

To create optimal walking conditions, blocks should be no more than four acres in size and no block face should have a length greater than 500 feet without a public or private road, alley, or pedestrian pathway providing through-access to another street or alley. The perimeter of any block should not exceed 1,600 feet. These dimensions do not apply to the areas between the Pike and the railroad/ Metro tracks or between the Chapman Avenue extension and the tracks where creating four-sided blocks is impractical.

The street master plan (Figure 4.8) indicates general locations where streets are required, in keeping with these general guidelines and making some adjustments for properties that are not expected to redevelop during the timeframe of this plan. The street master plan should be implemented with the stipulation that these street locations and alignments may be adjusted based on specific development proposals and engineering considerations.

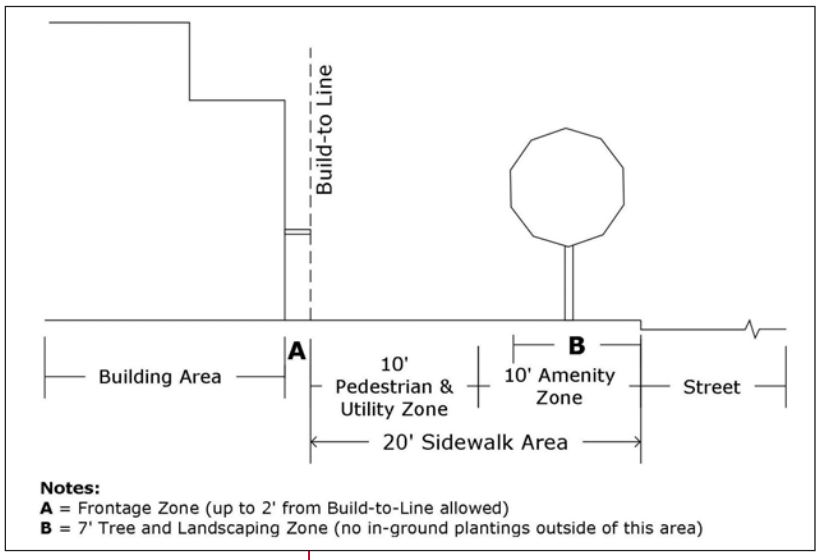


Figure 4.20 – Example of sidewalk components on Rockville Pike

5. PROVIDE WIDE AND PLEASANT SIDEWALKS

A sidewalk is more than a path for getting from one point to another; it is also a place to gather, browse in shop windows, stand while waiting for a bus, eat at outdoor cafes, or rest on a bench. Just as streets perform multiple roles as public places and as transportation corridors, sidewalks perform multiple roles as well and can be destinations in and of themselves.

The sidewalk is a key component of a walkable neighborhood. The design and location of sidewalks are core elements of this plan. "Good" sidewalks include the following characteristics, especially in areas with commercial activity:

- They are continuous - with no gaps in the sidewalk network.
- They are installed on both sides of all streets.
- They are protected from moving traffic by a planting strip or street trees. (Parked cars also provide separation of pedestrians from traffic.)
- Wherever possible, they are contiguous to visually interesting features, such as shop windows.
- They incorporate "street furniture" and aesthetically appealing amenities.

The 1989 Rockville Pike Plan included some of the same recommendations that are proposed by this plan, including moving buildings forward, closer to the Pike. However, the 1989 plan provided for Pike sidewalks that are separated from the land uses by the access drives and a landscaped setback. As a result, the continuous sidewalk as envisioned in the 1989 plan is more a feature of the Pike itself, and much less a part of a complete pedestrian environment, making it still difficult and unpleasant to walk from one site to another along the corridor.

This plan proposes that the continuous sidewalks be located immediately next to the land uses to encourage inter-site movement. The continuous sidewalk may be located adjacent to the main travel lanes of the Pike only on the east side in the North and Middle Pike, and may not include all of the components discussed below due to the land area constraints.

Sidewalks in the Plan Area should provide sufficient space that is free and clear for walking, with enough width beneath it for containment of underground public utilities. This "pedestrian zone" should be adjacent to an "amenity zone" that would serve as a buffer between the active pedestrian travel area and moving vehicular traffic. It should contain the utilitarian fixtures of an urban street, which, depending on the street and location, may include parking meters, signs, trash and recycling receptacles, and fire hydrants, as well as amenity features such as street

trees, planting strips, street furniture such as benches, bike racks, and outdoor restaurant seating. Locating these sidewalk components together in the amenity zone keeps them from being obstacles in the clear pedestrian travel zone. This zone also protects pedestrians from splashes and serves as a snow storage area after street and sidewalk clearing.

The Pike (South Pike and entire west side) is recommended to have the widest amenity zone in the Plan Area. Its wide amenity zone reflects the broad dimensions of the road and also contributes to the corridor's open space. A landscape/streetscape plan is a recommended implementation step for this plan that would provide guidance for the treatment of amenity zones by location, among other public spaces in the corridor. Undergrounding of aerial utilities is also recommended with new roads and with the redesign of Rockville Pike.

Figure 4.21: *This illustrative rendering shows the pedestrian environment created by the multi-way boulevard. It also shows how the chamfering of buildings at key intersections creates special places. Source: ACP*

A "frontage zone" is an area adjacent to the build-to line that may be defined by a building façade, landscaping, wall or fence. This is the area where pedestrians slow down to window shop as well as enter and exit buildings. Approximately 18-24 inches is needed to allow room for doors to open, a merchandise display, or a bench against a building wall. Architectural elements that would otherwise encroach into the sidewalk, such as stoops, may occupy this zone.

A frontage zone should be provided along streets in the Plan Area. This frontage zone is in addition to the sidewalk width. All street-fronting building facades should be allowed to step back a short distance (as defined in the Rockville Pike District Zone) from the build-to line to allow for bay windows and other façade articulation, planters, stoops, stairs, etc. The location of the build-to line would not change. The percentage of building façade at the build-to line would apply to the areas within the frontage zone rather than to a set line. The frontage zone is privately owned and maintained space adjacent to the public sidewalk.

6. ENHANCE THE PEDESTRIAN ENVIRONMENT OVERALL AND ESPECIALLY AT STRATEGIC INTERSECTIONS AND ON STRATEGIC STREETS

Intersections can serve as points of reference and as transitional areas. This plan recommends placing emphasis on the treatment of building frontages at strategic intersections: where Rockville Pike intersects with Twinbrook Parkway and Halpine Road, and on the west side of the Pike at Edmonston Drive, Wootton Parkway, and First Street. Buildings at these corners should be chamfered (i.e., cut symmetrically at a 45-degree angle) or otherwise designed to increase the face exposure of corner buildings and to create a larger pedestrian environment (see example, Figure 4.21). These areas can be used for additional landscaping, open-air cafes and restaurants, and to mark entryway to shops. Distinctive architecture, artwork, clocks, flags, fountains, unique shops, and other place-making features are encouraged in these locations.

In addition, the first story of building facades along Halpine Road should be allowed (but not be required) to be recessed along the north side of Halpine, from Jefferson Street to the Twinbrook Metro Station, to create pedestrian arcades, similar to those recommended in the 1989 Rockville Pike Plan. This would allow for special pedestrian treatment along this important east-west street that provides direct pedestrian access to the Twinbrook Metro Station. This plan also would favorably consider future opportunities to provide an underground, or otherwise grade-separated, crossing of Rockville Pike, at or near Halpine Road, as a safer crossing alternative at this important intersection near the Twinbrook Metro Station.

This Plan encourages a mix of uses.

7. ENSURE A MIX OF USES

Existing Conditions

Existing and approved development in the Plan Area represents a mix of residential and non-residential uses (as well as residents and employees), although the mix varies between different locations, represented by South, Middle, and North, and east and west sides of the Pike.

- A jobs-to-housing ratio is an indicator of whether or not there is a sufficient mix of commercial and residential uses in a defined geographic area that can contribute positively to place-making, encourage daytime and evening activity, provide broad support for retail uses, and result in environmental benefits, including reductions in automobile use. The Plan Area currently possesses a positive jobs-to-housing ratio, in that the number of jobs exceeds the number of housing units.[12]
- Existing uses in the South Pike include multifamily residential, retail, office

[12] *Jobs-to-housing ratios are cited by the American Planning Association (APA) as a good metric for evaluating the level of economic activity and employment in mixed-use areas relative to residential uses. For the DC region, MWCOG generally recommends a ratio of 1.6 jobs per household. The Jobs-to-Housing ratio is currently estimated by the City to be 1.92 in the South Pike area and 2.44 in the overall Plan Area. For comparison, the City-wide ratio is 3.03.*

and hotel. New residential and retail uses are planned.

- There are currently no residential units in the North Pike, or east of Rockville Pike in the Middle Pike. The majority of development in these locations is occupied by retail uses.
- There are some multifamily units and townhouses on the west side of the Middle Pike, as well as office buildings. Retail is proportionately less represented there than in other parts of the Plan Area.

The result is that, while the Plan Area overall includes a mix of uses, often they are not proximate to each other or to transit.

Recent Trends

Since the economy emerged from the recession of 2008-9, multifamily housing has been in strong demand in the region. Reduced demand for office space is inducing property owners in the Plan Area to replace job-generating office buildings with redevelopments that are purely or mostly multi-family residential. Over time, and without a change in market conditions, this trend will cause a decline in the Plan Area's jobs-to-housing ratio. Within the Plan Area, demand for multifamily housing has been strongest in the eastern side of the South Pike, near the Twinbrook Metro Station. The demand for office space, in contrast, has been much weaker. Should this trend continue well into the future, the existing balance between the number of people living in in the Plan Area, relative to the number of people working there, will be altered. This plan promotes taking proactive approaches to achieve a mix as expressed by the Corridor Planning Principles.

Most non-industrial uses can be accommodated within the Plan Area.

The millennial generation (roughly defined as persons born in the 1980s and 1990s) now comprises the largest share of the United States labor force. The development of employment centers and jobs is particularly sensitive to the ability to attract millennials to those locations. Consequently, there is a specific demand for residential units for millennials, which helps to attract the development of office, employment and retail centers, a human scale, and a walkable environment that many millennials prefer. Somewhat contrastingly, it is the senior population (traditionals and baby boomers) who comprise the largest and fastest-growing demographic group. The great challenge of mixed-use planning and development will be to create and maintain a complementary balance among these groups, as they age, and attendant factors that will ensure the health of neighborhoods and the City into the future.

Plan Policy

A mix of uses, within walking distance of each other and transit, along with supporting urban design and infrastructure, can enhance the pedestrian experience, encourage activity in the daytime and evening, reduce dependency on automobiles, and provide greater opportunity for people to conduct many of their daily activities within a short distance.

Market forces, and mixed-use zoning that simply allows a mix of uses, do not always produce the desired proportions of uses or a desirable balance between jobs and housing. In particular, while this Plan recognizes and accommodates

increased demand for housing, it seeks to create some assurance that retail and employment also remain strong features of the Corridor. This would add to the employment that is expected to remain in Montgomery County's adjacent Twinbrook Sector Planning Area that is within walking distance of the South Pike and the Metro Station.

In summary, good mixed-use development includes a combination of complementary uses, a sufficient proportion of each use within the mix, and some balance between the number of residents and employees.

This plan endorses the following approaches for achieving a mix of uses:

Most non-industrial uses can be accommodated within the Plan Area, including, but not limited to, residential, commercial, institutional, assembly, recreation, entertainment and civic uses.

This plan encourages massing and building forms that are visually interesting, but does not mandate particular architectural styles.

- Establishment of a jobs-to-housing ratio target for the Plan Area that encourages a mix of uses.
- Residential uses (other than single-unit detached houses) may be located anywhere in the Plan Area. Ground floor dwelling units in multi-family residential buildings must be set back from the build-to line, except in the Neighborhood frontages, to encourage activating uses facing the streets at the pedestrian level.
- Office uses are allowed anywhere, but services that are more retail in nature, in that they generate a high level of pedestrian activity (such as a retail bank branch) are not allowed in the Neighborhood frontages.
- Automobile filling stations may continue in current locations (as of the adoption date of this plan), but they are discouraged in new locations within the Plan Area. Electric car charging and other non-gasoline powering stations may be allowed in new locations.
- Certain uses, such as liquor sales, drive-through facilities, and commercial parking facilities, should be identified as conditional uses that may be allowed but that are subject to more discretionary review than permitted uses because of their potential impacts. Performance standards also may be applied as needed to ensure that allowed uses do not create a nuisance for neighboring properties.

Uses should be integrated whenever possible, whether in a single building, on a single site, or within a reasonable walking distance, in a way that creates synergy among the uses, mutually benefits each use, and begins to create vibrant urban neighborhoods.

- Specifically, in addition to addressing the contribution that the proposed use(s) make(s) to the Plan's mixed use Corridor Planning Principle, development proposals must include sufficient detail so that the City can quantify the development's individual impact on the Plan Area's jobs-to-housing ratio, including – for larger developments – the impact of each proposed development phase. Development proposals must address the contribution that the proposed use(s) make(s) to the Plan's mixed use Corridor Planning Principle.

Development proposals must be considered in the context of the existing and, to the extent known, future mix of uses to ensure that an appropriate mix is obtained.

- Floor-to-ceiling heights on the ground floor must, in most frontages, be high enough to accommodate retail uses to encourage activating uses at the street level.
- More building stories are allowed in the Core if the uses in the building are non-residential (up to 10 stories) than if the uses are primarily residential (up to 7 stories). This is intended to encourage office, retail, other commercial, civic and institutional uses near the Metro station and complement the residential development in that area.
- Many lots on the east side of the Middle Pike and North Pike have limited redevelopment potential. It is anticipated that uses on many of these sites will continue to be retail-oriented and accessed primarily by automobiles, since transit accessibility is limited, and the potential for robust pedestrian activity is not as strong as in the South Pike. This could change if a high capacity transit station were to be located here in the future.
- Rockville should take proactive and regulatory steps to ensure that housing, employment and services/retail uses all remain strong features of the Plan Area and that all uses have proximity to each other and to transit. In particular, Rockville should take steps to attract stable office users and major employers to the Plan Area, as market forces alone may not be sufficient.
- A report on the status of plan implementation, including an analysis of the existing and evolving mix of uses throughout the Plan Area, shall be produced biennially. The results of that report may be considered sufficient cause for changes to be made to the regulatory structure, including adding regulations or incentives, to maintain a desirable jobs-to-housing ratio, or steer toward an improved balance of uses.

8. ENSURE ADEQUACY OF PUBLIC FACILITIES

There is a pragmatic side of land use planning that cannot be overlooked. The best land use plans can be thwarted if the basics are not there. Public facilities are the basics. By them, cities and communities live or die. It will be a constant challenge for the City of Rockville and surrounding jurisdictions to stay on par with the demand for adequate public facilities, presently and as anticipated in the future, and particularly in times of tight budgets. Transportation policies and outcomes have major effects on land use outcomes.

Unrestrained traffic congestion limits the addition of new passenger trips. Any decline in the quality of education, fire or police protection can disturb neighborhoods and adversely affect property values. The age, adequacy and cost of water, sewer and utilities impact the cost and extent of new development. The public costs of providing these important facilities can overburden the level of real property taxes. When it comes to implementation, the elements of this plan, their timing and their costs have to be fitted to the reality of what is possible in main-

Figure 4.22: Fountain at the Rockville Town Square Plaza. Source: City of Rockville

taining the basics – the adequacy of public facilities – at a high and affordable level and without degradation of the levels now enjoyed by the people who live, work and shop in Rockville.

New development or redevelopment, therefore, should not overburden public facilities, including schools, roads, public transportation, water, sewer, parks and public safety infrastructure. A development application shall not be deemed to be consistent with this plan if, at the time of action by the Approving Authority, it is anticipated that it would cause any such facility to exceed its available capacity.

9. ENCOURAGE ENDURING, HUMAN-SCALE ARCHITECTURE THAT HAS VISUAL INTEREST

A building's façade serves as the interface between public and private spaces and, thereby, contributes to the pedestrian experience.

"Enduring" refers both to a building's ability to adapt to different uses over time and for its architecture to transcend trends. This goal can best be achieved by incorporating the ability to change uses, should the market change over time, through a building's sustainable design. This design consideration makes it less likely that a building will become vacant or be demolished if its use becomes obsolete or out of sync with market conditions. For example, the ground floor of buildings in most frontages should be built with ceilings that are high enough to accommodate retail uses, even if the ground floor is not initially occupied by a retail tenant. Retailers generally prefer to be on the ground floor of buildings, so such a requirement reserves that ability.

This plan does not mandate a particular architectural style but, rather, encourages massing and building forms that are visually interesting, contribute to energy on the street, help to establish an environment that encourages and facilitates pedestrian activity, and incorporate human scale detailing. Frequently spaced doors and windows at eye level, expression lines, and other façade articulation or building adornment oriented to pedestrians are examples of design features that serve all of these objectives.

Design guidelines should be considered to encourage human-scale massing and fenestration, and design elements to soften the impacts of massing and blank walls, without imposing too much rigidity or specificity that could produce an overly homogenous "themed" appearance for the corridor. Consideration should be given to developing coherence in other ways, i.e. sidewalks, street trees, artwork, wayfinding signage, etc. through a streetscape plan.

There are few buildings on today's Rockville Pike that offer enduring architecture. As noted in Appendix B, Rockville Pike History, most of the existing buildings were built after World War II as single-story strip commercial centers or single-use retail buildings. Some well-designed or notable buildings are located within the Plan Area; however, there are no sites that have been designated for preservation. Any building or site that may be significant would require further evaluation to determine its level of significance and whether it is eligible for designation under local criteria. The City should allocate sufficient resources to analyze which buildings within the Plan Area, if any, qualify for historic designation.

10. PROVIDE PARKS

Currently, there are no parks in the Plan Area. This plan establishes a goal of creating new parks. The need for parks and open space will grow as redevelopment occurs and the number of people living and working in the Rockville Pike corridor increases. Regional projections show that more than 11,000 residents can be expected to be living in the Plan Area by 2040[13], compared to approximately 3,500 currently, and most new residential development will be multifamily. In addition, approximately 13,000 employees may be working in the corridor by 2040, compared to about 9,000 today. New residential units will be predominantly in mid-rise buildings, with some potential for attached single-family housing (townhouses) as well. According to the section on recreational land and open space in the Municipal Growth Element (MGE) of Rockville's Comprehensive Master Plan, adopted by the Mayor and Council in December 2010, "The most pressing [open space] need in the context of mixed-use redevelopment is expected to be ensuring the availability of open space within walking distance of multifamily homes."[14]

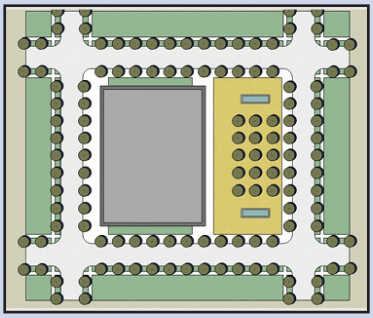
This plan calls for a minimum of ten acres of new parkland in the corridor.

Like other urbanizing areas, the Rockville Pike corridor must balance redevelopment with open and green space for recreation, visual amenities, and environmental quality. Community centers and other such recreational facilities will likely be needed within and outside of the Plan Area to accommodate the corridor's future population growth.

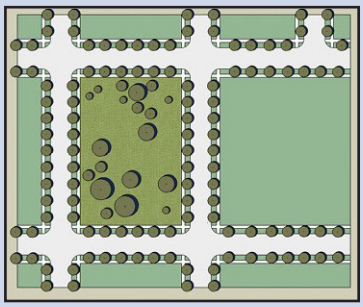
Residents create the greatest demand for parks. Just over 40% of the City's population growth is projected to occur in the Rockville Pike Plan Area over the next few decades and there will be substantial demand there for parks and open space. This is especially true given the fact that there are no parks now and few nearby.

New parks in the Plan Area also can be expected to draw from the wider City population, neighborhoods adjacent to the Plan Area, and existing and future residents of the surrounding county. Some parks in the vicinity, such as Montrose Park just west of the southern end of the Plan Area, are already often used to capacity. Improvements to existing nearby parks and facilities will likely need to be included in the City's CIP, especially as population increases. At the same time, Rockville's parks outside of the Plan Area and resources beyond the City limits will also provide

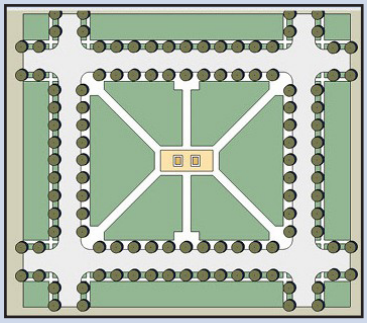
[13] *Metropolitan Washington Council of Governments (MWCOG) Round 8.2 projections*
[14] *Municipal Growth Element of the Comprehensive Master Plan, adopted December 13, 2010, p. 52. http://www.rockvillemd.gov/masterplan/elements/MunicipalGrowth121310.pdf.*



A **Plaza** is a formal open space that is available for civic and commercial uses and is spatially defined by building frontages. Landscaping may consist of pavement, trees and shrubs.



A **Green** is an open space that consists of lawn and informally arranged trees and shrubs. Greens are spatially defined by abutting streets and are typically furnished with paths, benches and open shelters.



A **Square** is a formal open space available for recreational and civic uses and spatially defined by abutting streets and building frontages. Landscaping often consists of a lawn, trees, and shrubs planted in formal patterns. Furnishings typically include paths, benches and open shelters. Urban squares consist of pavement, with or without landscaping.

Figure 4.23 Urban Parks and Open Space Types

some of the amenities demanded by new residents of the corridor.

A goal of Rockville's Department of Recreation and Parks is to have a park within ten minutes walking distance of any point in the City.[15] This plan recommends that parkland be located within a ten-minute walk from any residence within the Plan Area. A ten-minute walk equates to roughly one-quarter to one-half mile distance, acknowledging that this varies for different individuals.

A goal of this plan is for there to be at least one park on each side of the Pike in the South, one on the west side of the Middle, and, possibly, one on the west side of the North. Small, publicly accessible open spaces that are not necessarily dedicated to the City could augment, but not replace, dedicated parkland. Parkland should be well-distributed throughout the corridor to provide a wide range of functions, including recreational facilities (such as a skate park, playgrounds, and other facilities), neighborhood parks, a dog park, a community garden, and other open spaces that would serve a diverse community.[16]

A minimum of ten acres of parkland is the goal for the entire corridor. The minimum acceptable size for a park to count toward this goal is 3/10 acre, and

[15] *Rockville Parks, Recreation and Open Space (PROS) Plan, September 2009, p. 4-22*
[16] *Rockville Parks, Recreation and Open Space (PROS) Plan identifies specific facility needs on pp. 4.26-4.31.*

some may be primarily hard-scape. (Pervious materials should be used for hard-scape elements whenever feasible.) Plazas, greens, and squares are types of open space that fit well into an urban area and that typically range between 1/3 and 2 acres. (As an example, Rockville Town Square's plaza is one-half acre). Rockville should remain receptive to new and creative approaches to providing urban open spaces. Green roofs and privately provided open space and recreational amenities are encouraged, especially for residential buildings, but do not substitute for public parks. Landscaping with native plants is encouraged.

The City should seek the creation of a large active park in the context of any large-scale development that may be proposed in the future on the west side of the Middle Pike. This plan recognizes that a large-scale project that would occur on the Woodmont Country Club property may not be restricted to the boundaries of the Rockville's Pike Neighborhood Plan Area and therefore are not subject to the policies of this plan. However, this plan recommends a similar approach as other portions of the City's Comprehensive Master Plan are amended.

II. REQUIRE THE CREATION OF PUBLIC USE SPACE THROUGH REDEVELOPMENT

This plan recommends that, in addition to parks, development projects incorporate publicly accessible open space into projects. In general, 15% of the property for development projects should be made available for publicly accessible open space, or for fee-in-lieu of that public use space. The space should be oriented in such a manner that it is not hidden from public sidewalks and that the public may easily gain access to it and use it. To the greatest extent possible, the public open space should be assembled into large or adjoining land areas, rather than scattered throughout the site so as not to constitute usable space.

Fee-in-lieu funds should support parks located in or within a short walking distance (generally no more the 1/5 mile) of the Plan Area. However, there are no woodlands, forested areas, meadows, wetlands or other areas in the Plan Area that provide significant flora for wildlife. These are desirable types of parklands, and their acquisition or development and maintenance should be included in fee-in-lieu considerations of locations that are not in the Plan Area, along with garden plots, gazebos, picnic areas, pathways, passive areas, and landscaped areas.

With growing urbanization in the Corridor, more flexibility for what constitutes public use space is appropriate, but the key factors are general public access and visibility. Arcades, courtyards and other gathering spaces may be included if the general public has access because such spaces may be used for community gathering and events and enable vibrant neighborhood life.

Rockville Pike as Public Space

The "complete street" multi-way boulevard itself will provide public open space in the Plan Area by providing broad continuous sidewalks, bikeways that connect to the City's trail system, and trees and landscaping along the medians. "Greening" the Pike (with native plants) would improve the pedestrian and bik-

ing experience as well as make it more visually distinctive and environmentally friendly. A streetscape plan will be needed to implement this recommendation.

Art in Public Spaces

Well-sited and compelling artwork helps to express the City's sense of identity, values and heritage, demonstrate pride of citizenship, and energize public spaces. Local artists should be commissioned when possible. Placing artwork in parks or spaces intended for gathering is desirable. Significant public art at a gateway location on the Pike and for Metro passengers exiting the Twinbrook Metro Station would provide a welcoming entry to Rockville. Northern gateway locations may also be enhanced with artwork.

12. PROMOTE DEVELOPMENT WHICH, AT A MINIMUM, DOES NOT DEGRADE EXISTING ENVIRONMENTAL CONDITIONS

A policy of this plan is to improve the existing environment in the plan area through redevelopment plans that address environmental issues and establish procedures to measure effects of redevelopment on the surrounding area environment.

The Rockville's Pike Neighborhood Plan Area contains few remaining natural areas to protect with environmental policies, with the exception of portions of Woodmont Country Club. There are very few mature trees, very little pervious surface area, little effective on-site storm water management, no parks, and very little open space. Redevelopment actions may positively or negatively impact environmental conditions outside the area. However, the redevelopment that this plan calls for is subject to more stringent afforestation, storm water, open space and building code requirements than those in place decades ago when the Pike was developed. Redevelopment on the Pike, done well, can create a healthier and more environmentally robust community. Rockville should implement the best methods available for measuring environmental impacts City-wide and continue to evaluate, adopt and pioneer new methods as the science develops so that program adjustments can be made to further improve results. Sources of funding for monitoring methods will need to be addressed.

This plan recognizes the importance of urban wildlife. The impacts of development and redevelopment on urban wildlife also need to be recognized so that appropriate actions can be taken. Processes to protect existing mature trees (native ones, in particular) that provide habitat for urban wildlife, provide shade, improve air quality and reduce pollution in the storm water runoff feeding our watersheds should be considered. The habitat provided by a mature tree cannot be equivalently replaced even if several smaller trees are planted in its place. Therefore, emphasis should be on protection, rather than replacement, of mature and native trees, to the extent possible.

Periodic reviews of environmental ordinances and policies should be undertaken to ensure that regulations meet current technology goals and evolving environmental standards and practices.

13. STRATEGICALLY LOCATE AND RIGHT-SIZE PARKING

This plan locates, wherever possible, parking in structures behind or under buildings, thereby minimizing inactive zones and reducing the visually unappealing effect of large surface lots in front of buildings. Structured parking also reduces the amount of impervious surface relative to the number of cars and provides more street-front opportunities for stores and businesses. There should be a minimum parking setback at the first floor on street-facing facades so that parking garages do not dominate sidewalk areas and are not visually prominent. Parking drives should be discouraged in active pedestrian-oriented areas where there are alternative options.

On-street parking should be provided on the boulevard's access roads, on the entire west side and on both sides in the South Pike, and on all other streets in the plan area. This type of parking serves multiple functions beyond providing convenience to drivers and benefits to adjacent retailers. On-street parking slows traffic and actually becomes part of the pedestrian realm. Drivers tend to travel at slower speeds in the presence of on-street parking and parked cars provide a buffer, both of which help to create a safer pedestrian environment. On-street parking is not a requirement for the more flexible boulevard configuration on the east side of the North and Middle Pike.

At present, the prevailing parking standards in the Plan Area are appropriate. Shared parking arrangements are encouraged and may be a basis for reducing the amount of parking that is required. Flexibility should be allowed to provide an amount of parking that is either below or above the parking space requirements if found to be appropriate by the Approving Authority.

This plan acknowledges that developments that are built before the infrastructure becomes pedestrian-friendly may need more parking than those that come later. The burden for providing the required amount of parking will lie with private property owners. The City should periodically assess parking conditions within the Plan Area to ensure that City needs are being met. It is generally anticipated that more parking will be needed in the early years of plan implementation than in later years because the factors that reduce parking demand will take time to evolve. Allowing less parking in later years of plan implementation is based on the concept that movement in the corridor will become less reliant on automobiles and more urban and multi-modal over time and will, therefore, require less parking. Parking that can be converted to other uses over time is also encouraged.

Sites in the Middle and North Pike, on the east side of Rockville Pike, may not have the land needed to build parking structures and, therefore, may depend on surface lots for most of their parking needs into the future. These sites may also need to provide a greater amount of parking longer into the future than areas in the South Pike that are close to the Metro station and that will likely transition to a multi-modal environment more quickly. Improvements to transit in this portion of the Pike could alter this dynamic.